has jurisdiction of the appeal and that substantial questions are presented.

OPINION BELOW

The opinion of the District Court is reported at 242 F. Supp. 597 (adv. sheets), and a copy of the opinion and judgment is attached hereto as Appendix A. A copy of the report of the Interstate Commerce Commission in *Prevention of Rail-Highway Grade-Crossing Accidents*, 322 I.C.C. 1 (1964) is attached hereto as Appendix D, and a copy of the unreported order of the Commission, dated September 9, 1964, discontinuing the proceeding, is attached as Appendix B.

JURISDICTION

This suit was brought under 28 U.S.C. § 1336, to suspend, enjoin, annul, and set aside the report and order of the Interstate Commerce Commission, dated January 22, 1964, and September 9, 1964, respectively. The judgment of the District Court for the District of Columbia was entered on June 15, 1965, and notice of appeal was filed in that court on August 13, 1965. The jurisdiction of the Supreme Court to review this decision by direct appeal is conferred by Sections 1253 and 2101(b) of the Judicial Code, 28 U.S.C. §§ 1253 and 2101(b). The following decisions sustain the jurisdiction of the Supreme Court to review the judgment on direct appeal: *United States* v. *Drum*, 368 U.S. 370 (1962); *American Trucking Associations, Inc.* v. *United States*, 364 U.S. 1 (1960); *Frozen Food Express, Inc.* v. *United States*, 351 U.S. 40 (1956).

STATUTES INVOLVED

The National Transportation Policy, 49 U.S.C., preceding §§ 1, 301, 901, and 1001, and Sections 1(10), 1(21), 12(1), and 25(b) of the Interstate Commerce Act, 49 U.S.C. §§ 1(10), 1 (21), 12(1), and 26(b), are set forth verbatim in Appendix C.

QUESTIONS PRESENTED

1. Whether the Commission's holding that it has no safety jurisdiction over railroads with respect to rail-highway grade-crossing matters is contrary to the provisions of §§ 1(21), 25, and 12(1) of the Interstate Commerce Act, 49 U.S.C. §§ 1(21), 26, and 12(1)?

2. Whether the Commission's holding that it has no safety jurisdiction over railroads with respect to rail-highway grade-crossing matters but does have authority to prescribe regulations for the safe operation of motor vehicles under its jurisdiction is in contravention of the national transportation policy set forth in the provisions of the Interstate Commerce Act, 49 U.S.C., preceding §§ 1, 301, 901, and 1001?

3. Whether the District Court, in dismissing the complaint of the Plaintiffs, properly construed the law and correctly held that neither § 1(21) nor § 25(b) of the Interstate Commerce Act, 49 U.S.C. § 1(21) and § 26(b) respectively, vests the Commission with any safety jurisdiction over railroads with respect to rail-highway grade-crossing matters, thereby concluding that such jurisdiction resides exclusively in the states?

STATEMENT OF THE CASE

On February 6, 1961, the Commission entered a corrected order instituting this proceeding to investigate into and concerning accidents at railroad-highway crossings involving railway trains and highway motor vehicles transporting liquid petroleum and liquid petroleum products, explosives, flammable or oxidizing liquids and solids, flammable or poisonous compressed gases, volatile liquids and solids which emit poisonous fumes, corrosive liquids, and radioactive materials, for the purpose of determining what further safety requirements can or should be made, within the authority of the Commission; what additional

legislation may be necessary; and for the further purpose of focusing public attention on the gravity of the safety problem occasioned by collisions at railroad crossings between railroad trains and such motor vehicles. On September 13, 1961, the Commission entered an order amending the order of February 6, 1961, by broadening the investigation to include all accidents at railroad-highway crossings involving trains and highway motor vehicles regardless of the nature of the commodities transported.

In his report and recommended order served May 21, 1963, the Hearing Examiner concluded "that existing statutes do not confer upon this Commission any jurisdiction over railroads with respect to rail-highway grade crossing matters." (Appendix C to complaint, sh. 35) At the same time, he concluded that the Commission "does have authority under the Interstate Commerce Act (49 U.S.C. Sec. 204) to prescribe regulations for the safe operation of motor vehicles under its jurisdiction." *Ibid.* Exceptions to the Examiner's report and order were filed by various parties, including appellants, and replies were filed thereto. The Commission issued its report and order January 22 (served February 10), 1964, which differed in part from the conclusions reached by the Hearing Examiner. On the matter of its jurisdiction over the safety of operations of trains and motor vehicles at grade crossings, the Commission reached the same conclusion as the Examiner, stating that "section 25 and section 1, paragraph (21)' limit our jurisdiction to matters relating to the movement and operation of trains, and neither of these sections nor other existing statutes vest in us any jurisdiction over railroads with respect to rail-highway grade-crossing matters." 322 I.C.C. 48 However, the Commission also noted that it does have authority to prescribe regulations for the safe operation of motor vehicles under its jurisdiction. *Ibid.*

The District Court dismissed plaintiffs' complaint, holding "that neither Section 1(21) of the Interstate Com-

merce Act, nor Section 25(b) of the Interstate Commerce Act, vests the Commission with any safety jurisdiction over railroads with respect to rail-highway grade-crossings." 242 F. Supp. 601

THE QUESTIONS ARE SUBSTANTIAL

The basic question in this proceeding, as stated by the District Court, "is whether Congress has invested the Interstate Commerce Commission with jurisdiction over railroads with respect to rail-highway grade-crossing matters." 242 F. Supp. 599 This question concerns one aspect of the fundamental problem considered by the Commission, that of "reducing or minimizing the dangers ever present at rail-highway grade crossings." 322 I.C.C. 9 The magnitude of this danger, and the problem of minimizing it, is set out in the statistics shown in the Commission report. In 1961, there were 3,204 grade-crossing accidents resulting in 1,291 deaths and 3,514 injuries. 322 I.C.C. 16-17 In 1960, there were 3,195 grade-crossing accidents resulting in 1,364 deaths and 3,424 injuries. *Ibid.*

The Commission's investigation was undertaken to seek possible methods of preventing this annual carnage and the loss of untold millions in property damage. Yet the decision of the Commission, if allowed to stand, will prevent any effective action to reduce grade-crossing accidents by the one agency in a position to act. This is made clear by the juxtaposition of the Commission's findings and conclusions dealing with its jurisdiction over the persons involved in grade-crossing accidents. It found:

> That drivers of trucks and operators of motor vehicles engaged in intrastate operations not subject to the regulations of this Commission are responsible for the major part of the accidents occurring at rail-highway grade crossings. 322 I.C.C. 86

> That the passenger automobiles account for most of the accidents at rail-highway grade crossings or nearly four times the number of accidents in which motortrucks are involved while motorbuses account for an insignificant number of crossing acidents each year. *Ibid.*

> This evidence convincingly shows that the regulated [motor] carrier generally presents no problem and that the principal offender insofar as safety on the highway and the grade crossings is concerned, is the exempt, unregulated, or irresponsible carrier. 322 I.C.C. 71

> Section 25 and section 1, paragraph (21) limit our jurisdiction to matters relating to the movement and operation of trains, and neither of these sections nor other existing statutes vest in us any jurisdiction over railroads with respect to rail-highway grade-crossing matters. 322 I.C.C. 48

Having concluded that the motor vehicles involved in well over four-fifths of the grade-crossing accidents are not subject to its jurisdiction,[1] and further, that the regulated motor carriers "generally present no problem" in this area, the Commission foreclosed itself from any effective action in dealing with the grade-crossing problem by denying its jurisdiction over the train—the one vehicle involved in every grade-crossing accident. As shown by its subsequent action in Ex Parte Docket No. MC-40, *Qualifications of Employees and Safety of Operation*, 98 M.C.C. 741 (1965), the course the Commission left open to reduce grade-crossing accidents is to apply regulations of a more encompassing and strict nature to those vehicle operators which it found "generally present no problem" in this area.

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[1] Few, if any, of the passenger automobiles involved in four out of five grade-crossing accidents are subjected to Commission jurisdiction, while only a portion of the motor trucks and buses are subject to its jurisdiction since many of them are operating in intrastate commerce.

1. The relevant provisions of the Interstate Commerce Act vest safety jurisdiction in the Commission in broad terms, without limiting or qualifying language. The national transportation policy (Appendix C p. 34) declares the Congressional purpose, in part, "to promote safe, adequate, economical, and efficient service and foster sound economic conditions in transportation and among the several carriers." Section 1, paragraph (21), (Appendix C p. 35), empowers the Commission to authorize or require any carrier by railroad subject to the Act "to provide itself with safe and adequate facilities for performing as a common carrier its car service." And Section 25 (Appendix C, p. 36) empowers the Commission to require rail carriers to install designated devices "and/or other similar appliances, methods, and systems intended to promote the safety of railroad operation."

Despite the manifest intent to delegate broad power to the Commission to promote safety of operations of railroads and the absence of any language limiting its jurisdiction in this area, both the Commission and the District Court held that these statutory provisions do not grant to the Commission any jurisdiction over railroads with respect to rail-highway grade crossings.

Even though the Commission and the District Court reach the same conclusion regarding the absence of Commission jurisdiction over safety of railroad operations at rail-highway grade crossings under Section 1, paragraph (21), and Section 25, they come to this conclusion by somewhat different reasoning. The Commission reads the sections as granting to it only limited authority. Thus, it concludes that Section 25 embraces only appliances, methods, and systems to control train movements, to protect trains from collisions with each other and to increase the freedom and flexibility of train movements. 322 I.C.C. 46-47 In construing the phrase "safe and adequate facilities for performing . . . its car service" used in Section 1,

paragraph (21), the Commission did not even comment on the qualifying word, "safe," but merely noted that:

> This paragraph was enacted to enable this Commission to facilitate and expedite the movement of property, and it is significant to note that we have construed the provisions of this paragraph as not vesting in us even the authority to regulate the operation of passenger trains. 322 I.C.C. 48 (Citation omitted)

In its consideration of the scope of these provisions, the District Court started from the premise that authority over public safety at grade crossings is peculiarly within the police power of the states, and concluded that:

> In the absence of a clearly expressed purpose so to do, Congress will not be held to have intended to encroach upon the police power of the states. 242 F. Supp. 601

In reaching its conclusion that neither Section 1, paragraph (21), nor Section 25(b) vests the Commission with any safety jurisdiction over railroads with respect to rail-highway grade crossings the Court did not specifically deal with the provision in Section 1, paragraph (21), requiring "safe and adequate facilities for performing . . . its car service," but only discussed certain legislative material relating to Section 25.

2. The cornerstone of the District Court's reasoning is that Federal jurisdiction and State jurisdiction over grade-crossing safety are mutually exclusive. The decision cites a number of cases for the conclusion that, "Authority over public safety at rail-highway grade-crossings has been ruled by the Supreme Court of the United States as peculiarly within the police power of the states." 242 F. Supp. 599.[2] But none of the cited cases

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[2] Railroad Commission Cases (Stone v. Farmers' Loan & Trust Co.) 116 U.S. 307, 334, 6 S.Ct. 334, 388, 1191, 29 L.Ed. 636 (1886); Crutcher v. Commonwealth of Kentucky, 141 U.S. 47, 61, 11 S.Ct.

holds that jurisdiction over railroads with respect to railhighway grade-crossing matters resides exclusively in the States. To the extent they speak to the question at all, these cases indicate an area of possible concurrent jurisdiction. In *Erb* v. *Morasch*, *supra*, at 20 S. Ct. 820, this Court noted:

> Third, that a city, when authorized by the legislalature, may regulate the speed of railroad trains within the city limits. Such act is, even as to interstate trains, one only indirectly affecting interstate commerce, and is within the power of the state until at least Congress shall take action in the matter. (Citations omitted)

Southern R. Co. v. *King*, *supra*, 217 U.S. 524 (1910), is to the same effect. In *Cleveland, C.C. & St. L. R. Co.* v. *Illinois*, *supra*, at 20 S. Ct. 724, the Court said:

> Speaking of police regulations for the government of railroads while operating roads within the jurisdiction of the state, it was said that "they are not in themselves regulations of interstate commerce; and it is only when they operate as such in the circumstances of their application and conflict with the express or presumed will of Congress exerted upon the same subject, that they can be required to give way

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851, 35 L.Ed. 649 (1891); Cleveland, Cincinnati, Chicago & St. Louis Ry. Co. v. People of State of Illinois, 177 U.S. 514, 516, 20 S.Ct. 722, 44 L.Ed. 868 (1900); Erb v. Morasch, 177 U.S. 584, 585, 20 S.Ct. 819, 44 L.Ed. 897 (1900); Southern Railway Co. v. King, 217 U.S. 524, 533, 30 S.Ct. 594, 54 L.Ed. 868 (1910); Atlantic Coast Line R. Co. v. State of Georgia, 234 U.S. 280, 292, 34 S.Ct. 829, 58 L.Ed. 1312 (1914); Denver & Rio Grande R. Co. v. City and County of Denver, 250 U.S. 241, 245, 39 S.Ct. 450, 63 L.Ed. 958 (1919); Erie Railroad Co. v. Board of Public Utility Commissioners, 254 U.S. 394, 410, 41 S.Ct. 169, 65 L.Ed. 322 (1921); Railroad Commission of State of California v. Southern Pacific Co., 264 U.S. 331, 341, 44 S.Ct. 376, 68 L.Ed. 713 (1924); Missouri, Kansas & Texas Ry. Co. v. State of Oklahoma, 271 U.S. 303, 307, 46 S.Ct. 514, 70 L.Ed. 957 (1926); Lehigh Valley R. Co. v. Board of Public Utility Commissioners, 278 U.S. 24, 35, 49 S.Ct. 69, 73 L.Ed. 161 (1928).

> to the paramount authority of the Constitution of the United States."

The same quotation is cited with approval in *Atlantic C. L. R. Co.* v. *Georgia, supra.*

Despite the failure of these cases to hold that Federal and State jurisdiction in this area would be mutually exclusive, the District Court apparently felt such would be the result of a finding of Commission jurisdiction. It stated that Congress did not intend, by the 1937 amendments to Section 25, "to encroach upon the rights of the states to exercise their police power" with respect to grade-crossing safety. 242 F. Supp. 601 This is similar to the argument rejected by this Court in *California* v. *Zook*, 336 U.S. 725 (1949), that when Congress has acted as to a particular subject, all State action, even that which coincides with the Federal action, is automatically excluded. Upholding a conviction under a State statute regulating the sale or arrangement of transportation in interstate commerce, the Court noted the reasons why it did not find it necessary to upset the State law:

> We know that coincidence, with its consequent possibility of double punishment, is an important factor to be considered. In many cases it may be a persuasive indication of congressional intent. But we must look at the whole case. In this case the factors indicating exclusion of state laws are of no consequence in the light of the small number of local regulations and the state's normal power to enforce safety and good-faith requirements for the use of its own highways. 336 U.S. at 737

In *Southern Pac. Co.* v. *Arizona*, 325 U.S. 761 (1945), this Court reviewed the past decisions in this area and set out the test for determining Federal preemption:

> Congress, in enacting legislation within its constitutional authority over interstate commerce, will not be deemed to have intended to strike down a

> state statute designed to protect the health and safety of the public unless its purpose to do so is clearly manifested, or unless the state law, in terms or in its practical administration, conflicts with the Act of Congress, or plainly and palpably infringes its policy. 325 U.S. at 766 (Citations omitted.)

Another example of "concurrent" State and Federal jurisdiction is in the area of safety regulations for motor carriers in interstate and foreign commerce. The several States have enacted comprehensive motor-vehicle safety regulations including qualification and licensing of operators, standards for motor vehicles equipment, speed and traffic laws, etc., which apply equally to drivers in intrastate and interstate commerce. Yet the Commission has also established comprehensive Motor Carrier Safety Regulations, 49 C.F.R., Parts 190-198, applicable to operation in interstate commerce, including regulations governing qualifications of drivers, the driving of motor vehicles, parts and accessories necessary for safe operation, etc. Rather than excluding State regulation in this area, Section 190.30 of the Commission's regulations provides:

> Except as otherwise specifically indicated, Parts 190-197 of this subchapter are not intended to preclude States or subdivisions thereof from establishing or enforcing State or local laws relating to safety, the compliance with which would not prevent full compliance with these regulations by the persons subject thereto.

And Section 192.3 of those regulations provides:

> Every motor vehicle shall be driven in accordance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated, unless such laws, ordinances and regulations are at variance with specific regulations of this Commission which impose a greater affirmative obligation or restraint.

A further example of "concurrent" jurisdiction is in the very matter of train speeds, which are regulated by

some States and municipalities,[3] and are also affected by Interstate Commerce Commission regulation. In *Appliances and Systems to Promote Safety of Operation*, 268 I.C.C. 547 (1947), the Commission required railroads to install prescribed safety devices on the part or parts of their lines over which trains are to be operated at or above certain speeds, implicitly prohibiting speeds in excess of those prescribed in the absence of such devices.

The *Zook* case also demonstrates the normal manner in which the question of Federal supremacy arises: where the application of a State law or regulation is challenged as operating in an area where Congress has also acted. We have found no other case where the existence of State regulation has been considered the test of whether Federal legislation, unqualified by its own terms, should be judicially limited to exclude the area which the State is regulating.

3. An essential element of the reasoning leading to the District Court's conclusion on Federal encroachment, and the sole basis of the Commission's conclusion on its grade-crossing safety jurisdiction, is the construction given to the statutory language. The Comission discusses the provisions of both Section 1, paragraph (21), and Section 25, while the Court confines its discussion to Section 25.

The District Court refers to two items of legislative history as supporting its conclusion that Section 25 was not intended to give to the Commission jurisdiction over railroads with respect to rail-highway grade-crossing

[3] E.g., Some New Jersey municipalities apply speed restrictions to trains (Tr. 165); the Minnesota Railroad and Warehouse Commission is authorized to establish the rate of speed at which trains may operate over streets and highway crossings within municipalities (Tr. 362-63); the California Public Utility Commission has the power and has set speed limits at certain crossings and elsewhere, and some California cities have passed train-speed ordinances (Tr. 1521); Wisconsin has a local option law on train speed (Tr. 1616-17).

safety matters. First, it notes that the various acts amendatory and supplementary to the original Safety Appliance Act (now Section 25) state the purpose "to promote the safety of employees and travelers on railroads." Second, it refers to the exclusion from the express language of one of the amending bills of reference to "highway grade-crossing protective devices" on recommendation of the Commission. 242 F. Supp. 600

Absent ambiguity in the language of a statute, there is no reason to resort to "extrinsic aids" to determine its meaning. *Fairport Railroad* case, *infra*. But resort to the legislative history used by the Court below, in any event, does not justify the sweeping conclusion it reached. Even if the striking of the express reference to "highway grade-crossing protective devices" from a bill which amended Section 25 is interpreted as a manifestation of Congressional intent to exclude the requirement of such devices from the Commission's jurisdiction, there is no justification for interpreting it as manifesting an intent to bar *all* Commission jurisdiction over safety of railroad operations with respect to grade-crossing matters.

The stated purpose of an act is not necessarily a fixed limitation on its scope. This Court was presented with this identical argument in *Fairport, P. & E. R. Co.* v. *Meredith*, 292 U.S. 589 (1934), involving the construction of the provisions of Sections 1 and 9 of the Federal Safety Appliance Act, 45 U.S.C. §§ 1 and 9. The petitioning railroad contended that the Safety Appliance Act was intended only for the protection of the public and travelers upon the railroads, and had no relation to the safety of travelers upon the highways or of the public generally. While recognizing that that very likely was the primary purpose of Congress, the Court said:

> But we are asked to hold that the title expresses the sole intent of the act, and this involves a question of statutory construction. The title of an act and the

> history leading up to its adoption, as aids to statutory construction, are to be resorted to only for the purpose of resolving doubts as to the meaning of the words used in the act in case of ambiguity. But here the words of sections 1 and 9 of the act speak plainly, and nothing in the nature or operation of the legislation requires, or suggests the necessity of, and appeal to extrinsic aids to determine their meaning. It may be that the protective operation of section 2 of the act requiring automatic couplers was not meant to extend to persons other than employees. But the installation and use of power brakes required by sections 1 and 9 so obviously contribute to the safety of the traveler at crossings that it is hardly probable that Congress could have contemplated their inapplicability to that situation. 292 U.S. at 594-95 (Footnote and citations omitted.)

Nothing in the language of Sections 1, paragraph (21), and 25 raises any ambiguity requiring resort to extrinsic aids to determine its meaning. Neither does that language imply the limitation on its scope found necessary by the District Court. Both sections proclaim their purpose in the promotion of safety, without qualification and in clear, uncomplicated terms. Section 1, paragraph (2), calls for "safe and adequate facilities for performing . . . car service" by a railroad, and Section 25 covers appliances, methods, and systems "intended to promote the safety of railroad operation."

Referring to the obvious safety benefits of the power brakes required by Sections 1 and 9, the Court said:

> To confine the beneficial effect of these provisions to employees and passengers would be to impute to Congress an intention to ignore the equally important element which their enactment actually contributes to the safety of travelers at highway crossings. Since all of these three classes of persons are within the mischief at which the provisions are aimed, it is

> quite reasonable to interpret the statute imposing the duty as including all of them. 292 U.S. at 596

Approval of the decision below would result in an even more anomalous situation. The Commission would have complete power to regulate the most intimate details of train operations for the safety of railroad employees and equipment, except as their safety and protection are emperiled by train operations over grade crossings. While, under the decision in the *Fairport Railroad* case, *supra*, the Commission can require a railroad to have functioning air brakes for the protection of travelers at grade crossings, since it has no jurisdiction over safety of railroad operations at grade crossings, it could not require the railroad to apply those brakes to protect travelers on the intersecting highways. Patently, the decision below leads to such ridiculous conclusions because it is contrary to the clear intent of Congress and to this Court's conclusion in *Fairport Railroad.*

4. The Commission's construction of Section 1, paragraph (21), and 25 as narrow, limited grants of power is equally obnoxious to the manifest purpose of Congress to grant it broad safety jurisdiction. The Commission, at 322 I.C.C. 48, read the word "safe" out of Section 1, paragraph (21), which in its view is only intended to govern "adequate car service":

> This paragraph was enacted to enable this Commission to facilitate and expedite the movement of property, and it is significant to note that we have construed the provisions of this paragraph as not vesting in us even the authority to regulate the operation of passenger trains. See *Wisconsin R. Comm.* v. *Chicago & N. W. Ry. Co.*, 87 I.C.C. 195.

The Commission found a similar operational intention underlying Section 25, although it also recognized a limited safety purpose:

> Section 25 of the Interstate Commerce Act, contains no provisions for the protection of vehicular traffic at grade crossings and applies only to signals and other similar appliances, methods, and systems used for the safe movement and control of trains thereby protecting them from collisions. These signals are also installed as a means of increasing the capacity of rail lines by permitting the operation of more trains at increased speeds. These signal systems increase the freedom and flexibility of train movements. 322 I.C.C. at 46-47

On the other hand, the Commission has, in the past, recognized the primary safety purpose for the devices required by Section 25. In *Pennsylvania R. Co. Modification of Systems*, 238 I.C.C. 337, 341 (1940), it said:

> There can be no question that the purpose of the enactment of section 26(b) was to promote safety, and in disposing of cases under this section the Commission has confined itself to that matter.

To the same effect, in *Appliances and Systems to Promote Safety of Operation*, 281 I.C.C. 744, 747 (1951), it said:

> [T]he issue here for determination is not whether the installation of block signals is a sound investment under the circumstances but whether operation by petitioner of its passenger and freight trains at the speeds requested without an adequate automatic or manual block-signal system would be in the public interest and would afford the necessary protection intended in train operation.

The Commission has also recognized that one result of the increase in numbers of trains and of train speeds is an increase in the accident hazard. In *Automatic Train Control Devices*, 69 I.C.C. 258, 273 (1922), it said:

> It is evident from the record that automatic block signals were primarily installed as a means of increasing the capacity of existing lines. Such a system

> permits of the operation of more trains at increased speeds. This very fact, however, increases the possibility of accidents.

Likewise, in *Appliances and Systems to Promote Safety of Operation*, 268 I.C.C. 547, 558 (1947), the Commission noted the tendency toward increased speeds and greater number of trains, which had multiplied the accident hazard.

Even if Congress intended by Section 25 to increase railroad operating efficiency as the Commission here concludes, it did not intend so in complete disregard of the primary safety purpose of the provision. Absent a clear statement to the contrary, Congress cannot be presumed to have enacted a safety measure which would directly result in the operation of more trains at increased speeds, thereby increasing the danger of grade-crossing accidents among others, but at the same time to have withheld jurisdiction over grade-crossing safety. Nor can Congress be presumed, as the Commission does here, to have enacted a safety measure designed to protect trains from collisions with each other, but not from collisions with highway vehicles at grade crossings.

The only purpose expressed in Section 25 is safety: appliances, methods, and systems *intended to promote the safety of railroad operations*. Whatever attendant operating efficiency may accrue to the railroads from these devices, the promotion of economic advantage must remain subsidiary to the paramount safety purpose. The Interstate Commerce Act is remedial in nature and must be liberally construed in order to effect its evident purpose.[4]

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[4] *Interstate Commerce Commission* v. *Weldon*, 90 F. Supp. 873 (D.C. Tenn. 1950), *aff'd* 188 F. 2d 367, *cert. den.* 342 U.S. 827; *B & C Truck Leasing, Inc.* v. *Interstate Commerce Commission*, 283 F. 2d 163 (10th Cir. 1960); *Interstate Commerce Commission* v. *Teeter*, 228 F. Supp. 479 (D. C. Ga. 1964); *Interstate Commerce Commission* v. *Interstate Auto Shippers, Inc.*, 214 F. Supp. 473 (D. C. S.D.N.Y. 1963).

In interpreting the Act to ascertain the scope of the Commission's jurisdiction, it must be borne in mind that much of the Act is framed in general terms, since, in the delegation of agency power, Congress did not spell out the details for dealing with "every evil sought to be corrected." [5] It does not serve to look for specific language dealing with "the protection of vehicular traffic at grade crossings." 322 I.C.C. 46 One of the purposes for creating regulatory agencies was to relieve Congress of the need for framing exhaustively detailed legislation, and one of the justifications for such agencies is their ability to "bring to their work the expert's familiarity with industry conditions which members of the delegating legislatures cannot be expected to possess." [6] In the *Pennsylvania Railroad* case cited in footnote 6, this Court declined to search the statute for the grant of every item of Commission jurisdiction in specific language:

> There is no language in the present Act, which specifically commands that railroads must interchange their cars with connecting water lines. We cannot agree with the contention that the absence of specific language indicates a purpose of Congress not to require such an interchange. True, Congress has specified with precise language some obligations which railroads must assume. But all legislation dealing with this problem since the first Act in 1887, 24 Stat. 379, has contained broad language to indicate the scope of the law. The very complexities of the subject have necessarily caused Congress to cast its regulatory provisions in general terms. Congress has, in general,

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[5] *American Trucking Associations* v. *United States*, 344 U.S. 298, 309-310, 73 S. Ct. 307, 314 (1953); *National Broadcasting Corp.* v. *United States*, 319 U.S. 190, 219, 63 S. Ct. 997, 1010-1011 (1943); *Phelps Dodge Corp.* v. *National Labor Relations Board*, 313 U.S. 177, 194, 61 S. Ct. 845, 852 (1941).

[6] *American Trucking Associations* v. *United States*, *supra*, n. 5, citing *United States* v. *Pennsylvania R. Co.*, 323 U.S. 612, 65 S. Ct. 471 (1945).

> left the contents of these terms to be spelled out in particular cases by administrative and judicial action, and in the light of the congressional purpose to foster an efficient and fair national transportation system. 323 U.S. 616

The Act generally, and sections 1(21) and 25 particularly, are set out in the broadest terms with the obvious intent to give the Commission, in order to carry out the Congressional purpose, full power to establish any and all regulations reasonably designed to promote safety of train operation in all of its ramifications. The Congressional purpose in regulating commerce is expressed in the national transportation policy and the Act must be read and considered as a whole, and the various sections thereof must be interpreted and applied, in the light of that policy.[7] Among the stated purposes is the promotion of "*safe*, adequate, economical, and efficient service." Under § 1(21), the Commission's power extends to requiring the railroads to provide "*safe* and adequate facilities for performing . . . car service," and under § 25, it is empowered to require appliances, methods, and systems "intended to promote the *safety* of railroad operations." Both Section 1, paragraph (21), and Section 25 are, by their terms, designed to give the Commission broad jurisdiction over the safety of railroad operations and, contrary to its conclusion and the conclusion of the Court below, these sections do not circumscribe the Commission's jurisdiction to the extent claimed.

The evidence of record in this proceeding shows little, if any, safety regulation of railroads by the States. The Commission's evaluation of the States' part in grade-crossing safety (322 I.C.C. 24-40) deals almost exclusive-

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[7] *New York, S. & W. R. Co.* v. *United States*, 200 F. Supp. 860, 864-865 (D. C. N. J. 1961) *rev'd on other grounds*, 83 S. Ct. 614, and cases cited therein; *American Trucking Associations, Inc.* v. *United States*, 170 F. Supp. 38 (D. C. D. C. 1959), *rev'd on other grounds*, 364 U.S. 1.

ly with the cost of grade-crossing protective devices. Yet the Commission found that the present operating conditions need correcting. It found the need for a uniform warning time of not less than twenty seconds to be given to motorists of the approach of trains to grade crossings (322 I.C.C. 86), but did not prescribe such a rule because of its view of its authority. It found a need for prompt action to improve maintenance of railroad rights of way to provide adequate sight distances and improve grade-crossing safety (322 I.C.C. 89), but it only recommended such action because it felt unable to require it.

The Commission found a lack of uniformity and "considerable variance" in the distances necessary to stop trains under emergency conditions,—variances from 2,000 feet to two miles—plus a reluctance on the part of railroad employees to apply train brakes in emergency because of the dangers of "slack action" injuring the train crews or damaging the lading. 322 I.C.C. 77 Of course, the Commission would not prescribe stopping distances in light of its view of its jurisdiction. But it had another supporting reason for declining to act in this respect: "it is doubtful whether the prescription of stopping distances for trains, as suggested, would materially aid in preventing accidents at grade crossings, because of the impracticability of compliance with any prescribed stopping distances." 322 I.C.C. 78

Affirmance of the decision below would mean that the train—the one vehicle involved in all grade-crossing accidents—will remain substantially unregulated. Affirmance will mean that the Interstate Commerce Commission will be unable to act effectively to reduce the substantial loss of life and property in grade-crossing accidents because its jurisdiction will be limited to the regulated interstate motor carriers—the one group which "generally presents no problem." 322 I.C.C. 71 And it will mean that, contrary to the National Transportation Policy's mandate of

fair and impartial regulation of all modes of transportation those regulated interestate motor carriers will be plagued with attempts to hobble them with more encompassing and stricter regulations even though they present no grade-crossing safety problem,[8] while the trains continue to operate over grade crossings, unregulated and often out of control.

[8] See *Qualifications of Employees and Safety of Operation*, 98 M.C.C. 741, decided May 24 and served June 2, 1965. That rulemaking proceeding arose out of the investigation proceeding here under attack, and proposed to establish more stringent regulations on the regulated interstate motor carriers. Even though the Commission ultimately decided not to adopt the more burdensome amendments, the proceeding is an indication of what the motor carriers can expect as a result of the finding here of lack of jurisdiction over railroads.

CONCLUSION

The questions presented by this appeal are substantial and of public importance. For the reasons stated, it is urged that jurisdiction be noted and that the judgment of the District Court be reversed and the case remanded to that court for disposition consistant with this Court's opinion.

Respectfully submitted,

PETER T. BEARDSLEY
HARRY J. JORDAN
WILLIAM R. RUBBERT
PAUL D. BORGHESANI
RICHARD R. SIGMON
1616 P Street, N. W.
Washington, D. C. 20036

HARRY C. AMES, JR.
Transportation Building
Suite 529
Washington, D. C. 20006

Attorneys for Appellants

CERTIFICATE OF SERVICE

I, Richard R. Sigmon, one of the attorneys for appellants herein, and a member of the Bar of the Supreme Court of the United States, hereby certify that, on the 12th day of October, 1965, I served copies of the foregoing document on the several parties hereto, as follows:

1. On the United States, by mailing copies in duly-addressed envelopes, with postage prepaid, to Honorable Thurgood Marshall, the Solicitor General, Department of Justice, Washington, D. C. 20530, to Robert B. Hummel, Chief, Appellate Section, Antitrust Division, Department of Justice, Washington, D. C. 20530, and to the United States Attorney, Washington, D. C.

2. On the Interstate Commerce Commission, by mailing copies in duly-addressed envelopes, with postage prepaid, to Robert W. Ginnane, General Counsel, and Fritz R. Kahn, Chief, Section of Litigation, at the Offices of the Commission, Washington, D. C. 20423.

3. On the Atchison, Topeka, and Santa Fe Railway Company, et al., and Southern Railway Company, et al., intervening defendants, by mailing copies in duly-addressed envelopes, with postage prepaid, to Paul F. McArdle, Esq., Union Trust Building, Washington, D. C. 20005, to William M. Moloney, Esq. and Carl V. Lyon, Esq., Association of American Railroads, 929 Tranportation Building, Washington, D. C. 20006, and to James A. Bistline, Esq., and William P. Stallsmith, Jr., Esq., Post Office Box 1808, Washington, D. C. 20013.

4. On the National Association of Railroad and Utilities Commissioners, *amicus curiae*, by mailing copies in duly-addressed envelope, with postage prepaid, to R. Everette Kreeger, Esq., 3327 I.C.C. Building, P. O. Box 684, Washington, D. C. 20044.

5. On the Public Utilities Commission of the State of California, intervening defendant, by mailing copies in

duly-addressed envelopes, with postage prepaid, to Richard E. Tuttle, Esq., and William C. Bricca, Esq., California Public Utilities Commission, 5072 State Building, San Francisco, California 94102.

6. On the Brotherhood of Locomotive Engineers, et al., intervening defendants, by mailing copies in duly-addressed envelopes, with postage prepaid, to Harold N. McLaughlin, Esq., and John H. Ritter, Esq., 1190 Union Commerce Building, Cleveland, Ohio 44114, and to Geo. Stephen Leonard, Esq., 1730 K Street, N. W., Washington, D. C. 20006.

7. On the State of Illinois, intervening defendant, by mailing copies in duly-addressed envelope, with postage prepaid, to William G. Clark, Attorney General, State of Illinois, Illinois Commerce Commission, 160 North La Salle Street, Chicago, Illinois 60601.

8. On the State of South Dakota, intervening defendant, by mailing copies in duly-addressed envelope, with postage prepaid, to Frank L. Farrer, Attorney General, State of South Dakota, Pierre, South Dakota.

9. On the Commonwealth of Massachusetts, Department of Public Utilities, intervening defendant, by mailing copies in duly-addressed envelope, with postage prepaid, to Norman Mason, Chairman, Massachusetts Department of Public Utilities, Boston, Massachusetts.

RICHARD R. SIGMON

APPENDIX A

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
Plaintiffs,

v.

UNITED STATES of America and Interstate Commerce Commission,
Defendants.

Civ. A. No. 1905-64.

UNITED STATES DISTRICT COURT.
DISTRICT OF COLUMBIA

June 10, 1965.

OPINION

Before TAMM, Circuit Judge, and KEECH and CURRAN, District Judges.

CURRAN, District Judge.

This is a civil action to suspend, enjoin, annul and set aside a report and order issued by the Interstate Commerce Commission, in its Docket No. 33440, Prevention of Rail-Highway Grade-Crossing Accidents Involving Railway Trains and Motor Vehicles, on January 22, 1964, discontinuing said proceeding.

The jurisdiction asserted by the plaintiffs is based upon the provisions of the Interstate Commerce Act, the Administrative Procedure Act, and Sections 1336, 1398, 2284, and 2321 to 2325 inclusive of Title 28, United States Code. The United States of America was named a party defendant pursuant to the provisions of the United States Code, and the interventing defendants were allowed by order of this court to intervene in support of the defendants.

After a petition requesting the institution of an investigation to determine what action should be taken by the Commission to prevent collisions at railroad crossings between railway trains and motor vehicles engaged in the transportation of petroleum and dangerous inflammable liquids had been denied, the Commission, on February 6, 1961, instituted on its own motion an investigation into and concerning accidents at railroad-highway crossings involving railroad trains and highway motor vehicles transporting petroleum products and dangerous inflammable liquids. On September 13, 1961, the investigation was broadened to include all accidents at railroad-highway crossings involving trains and highway motor vehicles regardless of the nature of the commodities being transported. The main purpose of the investigation, as we view it, was to determine what safety requirements could be made within the authority of the Commission. The Commission concluded that the existing statutes did not vest it with any jurisdiction over railroads with respect to rail-highway grade-crossing matters, and the proceedings were formally discontinued effective January 22, 1964.

In our opinion, the basic question presented by the plaintiffs' complaint is whether Congress has invested the Interstate Commerce Commission with jurisdiction over railroads with respect to rail-highway grade-crossing matters.

[1] Authority over public safety at rail-highway grade-crossings has been ruled by the Supreme Court of the United States as peculiarly within the police power of the states. Railroad Commission Cases (Stone v. Farmers' Loan & Trust Co.) 116 U.S. 307, 334, 6 S.Ct. 334, 388, 1191, 29 L.Ed. 636 (1886); Crutcher v. Commonwealth of Kentucky, 141 U.S. 47, 61, 11 S.Ct. 851, 35 L.Ed. 649 (1891); Cleveland, Cincinnati, Chicago & St. Louis Ry. Co. v. People of State of Illinois, 177 U.S. 514, 516, 20 S.Ct. 722, 44 L.Ed. 868 (1900); Erb v. Morasch, 177 U.S.

584, 585, 20 S.Ct. 819, 44 L.Ed. 897 (1900); Southern Railway Co. v. King, 217 U.S. 524, 533, 30 S.Ct. 594, 54 L.Ed. 868 (1910); Atlantic Coast Line R. Co. v. State of Georgia, 234 U.S. 280, 292, 34 S.Ct. 829, 58 L.Ed. 1312 (1914); Denver & Rio Grande R. Co. v. City and County of Denver, 250 U.S. 241, 245, 39 S.Ct. 450, 63 L.Ed. 958 (1919); Erie Railroad Co. v. Board of Public Utility Commissioners, 254 U.S. 394, 410, 41 S.Ct. 169, 65 L.Ed. 322 (1921); Railroad Commission of State of California v. Southern Pacific Co., 264 U.S. 331, 341, 44 S.Ct. 376, 68 L.Ed. 713 (1924); Missouri, Kansas & Texas Ry. Co. v. State of Oklahoma, 271 U.S. 303, 307, 46 S.Ct. 517, 70 L.Ed. 957 (1926); Lehigh Valley R. Co. v. Board of Public Utility Commissioners, 278 U.S. 24, 35, 49 S.Ct. 69, 73 L.Ed. 161 (1928).

In the Railroad Commission Cases (Stone v. Farmers' Loan & Trust Co.), supra, after stating that the state may regulate freights and fares for business done within the state, the Court said,

> "* * * So it may make all needful regulations of a police character for the government of the company while operating its road in that jurisdiction. In this way it may certainly require the company to fence so much of its road as lies within the state; to stop its trains at railroad crossings; to slacken speed while running in a crowded thoroughfare; * * * and other things of a kindred character affecting the comfort, the convenience, or the safety of those who are entitled to look to the state for protection against the wrongful or negligent conduct of others. * * *"

In Erie Railroad Co. v. Board of Public Utility Commissioners, supra, the Supreme Court stated,

> "Grade crossings call for a necessary adjustment of two conflicting interests—that of the public using the streets and that of the railroads and the public using them. Generically the streets represent the more important interest of the two. There can be no doubt

that they did when these railroads were laid out, or that the advent of automobiles has given them an additional claim to consideration. They always are the necessity of the whole public, which the railroads, vital as they are, hardly can be called to the same extent. Being places to which the public is invited and that it necessarily frequents, the State, in the care of which this interest is and from which, ultimately, the railroads derive their right to occupy the land, has a constitutional right to insist that they shall not be made dangerous to the public, whatever may be the cost to the parties introducing the danger. That is one of the most obvious cases of the police power, or to put the same proposition in another form, the authority of the railroads to project their moving masses across thoroughfares must be taken to be subject to the implied limitation that it may be cut down whenever and so far as the safety of the public requires."

In Lehigh Valley R. Co. v. Board of Public Utility Commissioners, supra, the Supreme Court stated,

> "This court has said that, where railroad companies occupy lands in the state for use in commerce, the state has a constitutional right to insist that a highway crossing shall not be dangerous to the public, and that, where reasonable safety of the public requires abolition of grade crossings, the railroad can not prevent the exercise of the police power to this end by the excuse that such change would interfere with interstate commerce or lead to the bankruptcy of the railroad."

[2] The Interstate Commerce Commission is a creature of statute, and the Commission cannot exceed the specific authority delegated to it by the Congress. The original Safety Appliance Act was adopted March 2, 1893 (27 Stat. 531). This Act was amended by the Act of March 2, 1903 (32 Stat. 943), and as so amended, it was supplemented by the Act of April 14, 1910 (36 Stat. 298).

In both the amendatory and supplementary acts, Congress repeated its purpose "to promote the safety of *employees* and *travelers* upon railroads" (emphasis supplied). Section 25 of the Act was amended by the Act of August 26, 1937 (50 Stat. 835). The measure which was finally adopted by the Congress was S. 29, a Bill "to promote the safety of employees and travelers on railroads * * *". As originally introduced, one of the devices included was "highway grade-crossing protective devices". This bill was referred by the Chairman of the Committee on Interstate Commerce to the Commission for comments. On February 19, 1937, Mr. Joseph B. Eastman, Chairman, Legislative Committee, stated, inter alia, "There is no doubt that highway grade-crossing protective devices do in a measure increase safety of railroad operation; nevertheless, devices of this character are installed primarily to safeguard highway traffic. The inclusion of devices of this character in a Federal law would at once raise a question as to the authority of states, counties, cities and other political divisions, to continue to exercise their present powers in requiring the protection of dangerous highway crossings. * * * it is questionable whether it would be good public policy to include highway grade-crossing protective devices in an act of this character."

The bill was reported out on March 24, 1937, with amendments, which included striking out "highway grade-crossing protective devices" wherever it appeared in the measure. H.R. 185 was identical with S. 29. The language "highway grade-crossing protective device" was stricken from H.R. 185 on the recommendation of the Commission.

In view of the legislative history, it is clear to us that Congress, by the 1937 amendments to Section 25, did not intend to encroach upon the right of the states to exercise their police power with respect to rail-highway grade-crossing safety matters. In the absence of a clearly ex-

pressed purpose so to do, Congress will not be held to have intended to encroach upon the police power of the states.

[3] We hold that neither Section 1(21) of the Interstate Commerce Act, nor Section 25(b) of the Interstate Commerce Act, vests the Commission with any safety jurisdiction over railroads with respect to rail-highway grade-crossings.

We conclude, therefore, that jurisdiction to establish safety regulations with respect to rail-highway grade-crossing matters resides exclusively in the states.

Defendants and intervenors have challenged the status of the present plaintiffs to maintain this action because of the plaintiffs' inability to show any legal damage resulting from the action of the Interstate Commerce Commission. The Court believes that the plaintiffs lack status to maintain this action, and if the Court were required to pass upon this question, it would so hold. Since, however, the Court finds and holds that the Interstate Commerce Commission is without jurisdiction over railroads with respect to rail-highway grade-crossing matters, and since this finding is dispositive of the case in its entirety, the Court does not believe it is necessary to enlarge upon the question of the plaintiffs' status to sue.

[4] The plaintiffs, at the hearing of this case, offered in evidence the entire record of the proceedings before the Interstate Commerce Commission. Defendants and intervenors objected to the admission of this record, basically upon the ground of its immateriality. The Court has decided that the record of the proceedings before the Interstate Commerce Commission should be received in evidence, and the Court has admitted it. In addition, the Court has considered the ruling of the Interstate Commerce Commission in its opinion MC-40.

The complaint shall be dismissed and judgment shall be rendered for the defendants, and the counsel for the United States will prepare the appropriate order.

IN THE UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF COLUMBIA

CIVIL ACTION No. 1905-64

AMERICAN TRUCKING ASSOCIATIONS, INC., ET AL.,
Plaintiffs,

v.

UNITED STATES OF AMERICA, ET AL.,
Defendants,

and

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, ET AL.,
Intervening Defendants.

JUDGMENT

This action having come on for hearing on June 3, 1965, before this duly constituted statutory three-judge Court, and having been submitted for consideration and decision, and the Court on June 10, 1965, having filed its Opinion herein in which the Court concluded that the Interstate Commerce Act does not vest the Interstate Commerce Commission with any safety jurisdiction over railroads with respect to rail-highway grade-crossings, and that the complaint should be dismissed and judgment rendered for the defendants; Now, therefore, pursuant thereto it is hereby

ORDERED AND ADJUDGED that plaintiff's complaint be, and it is hereby, dismissed on the merits.

Dated at Washington, District of Columbia, this 15th day of June, 1965.

/s/ Edward A. Tamm
EDWARD A. TAMM
United States Circuit Judge

/s/ Richmond B. Keech
RICHMOND B. KEECH
United States District Judge

/s/ Edward M. Curran
EDWARD M. CURRAN
United States District Judge

Approved as to form

/s/ Richard R. Sigmon
RICHARD R. SIGMON
Attorney for Plaintiffs

APPENDIX B

SERVICE DATE
SEPTEMBER 11, 1964

ORDER

At a General Session of the INTERSTATE COMMERCE COMMISSION, held at its office in Washington, D.C., on the 9th day of September, A.D., 1964.

No. 33440

PREVENTION OF RAIL-HIGHWAY GRADE-CROSSING ACCIDENTS INVOLVING RAILWAY TRAINS AND MOTOR VEHICLES

It appearing, That by an order dated February 6, 1961, as amended September 13, 1961, the Commission instituted an investigation into the concerning accidents at railroad-highway crossings involving railway trains and highway motor vehicles:

It further appearing, That a full investigation of the matters and things involved has been made, and that the Commission, on January 22, 1964, has made and filed a report containing its findings of fact and recommendations thereon, which report is hereby referred to and made a part hereof;

And it further appearing, That this proceeding should be discontinued;

It is ordered, That this proceeding be, and it is hereby, discontinued, effective as of January 22, 1964.

By the Commission.

HAROLD D. MCCOY
Secretary

(SEAL)

APPENDIX C

STATUTES INVOLVED

NATIONAL TRANSPORTATION POLICY

[*September 18, 1940.*] [*49 U.S.C., preceding §§ 1, 301, 901, and 1001.*] It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this Act, so administered as to recognize and preserve the inherent advantages of each; to promote safe, adequate, economical, and efficient service and foster sound economic conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; to cooperate with the several States and the duly authorized officials thereof; and to encourage fair wages and equitable working conditions;—all to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the Postal Service, and of the national defense. All of the provisions of this Act shall be administered and enforced with a view to carrying out the above declaration of policy.

PART I

REGULATION IN GENERAL; CAR SERVICE; ALTERATION OF LINE

SEC. 1. [*As amended June 29, 1906, April 13, 1908, June 18, 1910, May 29, 1917, August 10, 1917, February 28, 1920, June 19, 1934, August 9, 1935, September 18, 1940, June 24, 1948, August 2, 1949, August 12, 1958*] [*49 U.S.C. § 1.*]

* * * *

(10). The term "car service" in this chapter shall include the use, control, supply, movement, distribution, exchange, interchange, and return of locomotives, cars, and other vehicles used in the transportation of property, including special types of equipment, and the supply of trains, by any carrier by railroad subject to this chapter.

* * * *

(21). The Commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to this chapter, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this chapter, and to extend its line or lines: *Provided*, That no such authorization or order shall be made unless the Commission finds, as to such extension, that it is reasonably required in the interest of public convenience and necessity, or as to such extension or facilities that the expense involved therein will not impair the ability of the carrier to perform its duty to the public. Any carrier subject to this chapter which refuses or neglects to comply with any order of the Commission made in pursuance of this paragraph shall be liable to a penalty of $100 for each day during which such refusal or neglect continues, which shall accrue to the United States and may be recovered in a civil action brought by the United States.

* * * *

AUTHORITY AND DUTIES OF COMMISSION; WITNESSES; DEPOSITIONS

SEC. 12. [*As amended March 2, 1889, February 10, 1891, February 28, 1920, August 9, 1935, September 18, 1940.*] [*49 U.S.C. § 12.*] (1) The Commission shall have authority, in order to perform the duties and carry out the objects for which it was created, to inquire into and report on the management of the business of all

common carriers subject to the provisions of this part, and to inquire into and report on the management of the business of persons controlling, controlled by, or under a common control with, such carriers, to the extent that the business of such persons is related to the management of the business of one or more such carriers, and the Commission shall keep itself informed as to the manner and method in which the same are conducted. The Commission may obtain from such carriers and persons such information as the Commission deems necessary to carry out the provisions of this part; and may transmit to Congress from time to time such recommendations (including recommendations as to additional legislation) as the Commission may deem necessary. The Commission is hereby authorized and required to execute and enforce the provisions of this part; and, upon the request of the Commission, it shall be the duty of any district attorney of the United States to whom the Commission may apply to institute in the proper court and to prosecute under the direction of the Attorney General of the United States all necessary proceedings for the enforcement of the provisions of this part and for the punishment of all violations thereof, and the costs and expenses of such prosecution shall be paid out of the appropriation for the expenses of the courts of the United States; and for the purposes of this part the Commission shall have power to require, by subpoena, the attendance and testimony of witnesses and the production of all books, papers, tariffs, contracts, agreements, and documents relating to any matter under investigation.

* * * *

SAFETY APPLIANCES, METHODS, AND SYSTEMS

SEC. 25. [*February 28, 1920, amended August 9, 1935, August 26, 1937, September 18, 1940.*] [*49 U.S.C., § 26.*]

* * * *

(b) The Commission may, after investigation, if found necessary in the public interest, order any carrier within a time specified in the order, to install the block signal system, interlocking, automatic train stop, train control, and/or cab-signal devices, and/or other similar appliances, methods, and systems intended to promote the safety of railroad operation, which comply with specifications and requirements prescribed by the Commission, upon the whole or any part of its railroad such order to be issued and published a reasonable time (as determined by the Commission) in advance of the date for its fulfillment: *Provided*, That block signal systems, interlocking, automatic train stop, train control, and cab-signal devices in use on August 26, 1937, or such systems or devices hereinafter installed may not be discontinued or materially modified by carriers without the approval of the Commission: *Provided further*, That a carrier shall not be held to be negligent because of its failure to install such systems, devices, appliances, or methods upon a portion of its railroad not included in the order, and any action arising because of an accident occurring upon such portion of its railroad shall be determined without consideration of the use of such systems, devices, appliances, or methods upon another portion of its railroad.

APPENDIX D

Served Feb. 10, 1964

3012

INTERSTATE COMMERCE COMMISSION REPORTS

No. 33440

PREVENTION OF RAIL-HIGHWAY GRADE-CROSSING ACCIDENTS INVOLVING RAILWAY TRAINS AND MOTOR VEHICLES

Decided January 22, 1964

Upon investigation, found that in order to preserve public safety by the elimination or reduction of hazards at rail-highway grade crossings it is not only desirable but essential among other things (1) that certain definite and cooperative action be instituted and maintained between the local, State and Federal authorities; and (2) that existing safety regulations applicable at rail-highway grade crossings be strictly enforced. Proceeding discontinued.

Harry C. Ames, Jr., Thomas J. Barnett, Peter T. Beardsley, W. J. Burns, William F. Cottrell, Joseph H. Cummins, G. M. Dempsey, George C. Doering, Gerald D. Finney, Charles O. Gillogly, Joseph H. Hays, Carl Helmetag, Jr., H. W. Henderson, William J. Hickey, Harry J. Jordon, Howard D. Koontz, Arthur C. Kreutzer, K. H. Lundmark, John E. McCullough, Harold N. McLaughlin, William M. Moloney, Chester A. Prior, Louis Reznek, Harold A. Ross, Preston C. Shannon, Richard R. Sigmon, Robert O. Smith, Jr., C. Austin Sutherland, Jeremiah C. Waterman, Don Welch, Jr., David E. Wells, and *Richard V. Wicka* for respondents.

Monte Adams, George W. Ballard, Don A. Boyd, Jefferson C. Church, Robert J. Corber, Jack R. Davis, Richard A. Hollander, Anthony L. Marino, Walter D. Matson, Leonard M. Wickliffe, Graham R. Mitchell, and *John W. Turner* for interveners.

Joseph E. Keller, B. H. Lord, Jr., and *W. H. Borghesani* for a petroleum institute.

Joseph J. Doran for New York Public Service Commission.

William C. Bricca and *James K. Gibson* for Public Utilities Commission of California.

R. E. Purucker and *William E. Torkelson* for Public Service Commission of Wisconsin.

R. B. Thomas for Illinois Commerce Commission.

William Gural for New Jersey Board of Public Utility Commissioners.

Austin L. Roberts, Jr., and *R. Everette Kreeger* for National Association of Railroad Utilities Commissioners.

Lawrence D. Powers and *Berkeley Wright* for United States Bureau of Public Roads.

H. T. Rittman for explosives interests.

H. W. Jervis for a chemists association.

Asa J. Merrill, Theodore Polydoroff, John J. Charuhas, and *William L. Harrison* for Bureau of Inquiry and Compliance, Interstate Commerce Commission.

REPORT OF THE COMMISSION

BY THE COMMISSION:

Exceptions to the report and order recommended by the examiner were filed by the American Trucking Associations, Inc., and National Tank Truck Carriers, Inc., the Central Committee on Highway Transportation of the American Petroleum Institute; the Private Carrier Conference, Inc., of the American Trucking Associations, Inc.; and the Bureau of Inquiry and Compliance, Interstate Commerce Commission. A reply was filed to all of the above exceptions by railroad respondents. A reply was also filed by the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen; the Order of Railroad Conductors and Brakemen, and the Brotherhood of Railroad Trainmen to the exceptions of the American Trucking Associations, Inc., and the National Tank Truck Carriers, Inc.; the Private Carrier Conference, Inc., of the American Trucking Associations, Inc.; and the Central Committee on Highway Transportation of the American Petroleum Institute. Our conclusions differ in part from those recommended by the examiner.

EXAMINER'S RECOMMENDATIONS, EXCEPTIONS, AND REPLIES

The examiner recommended that:

1. An organization be created either by resolution of Congress or by an Executive order of the President, composed of a high ranking Government official and representatives of industry, labor, State officials and others with a direct interest in improved protection at rail-highway grade crossings, its object to formulate uniform standards to be referred to appropriate State officials. Such standards would form a basis for evaluation of conditions as to what rail crossings would be considered mandatory for the installation of positive protection, or, as an alternative, for their being restricted against the operation of heavily loaded vehicles, particularly those with dangerous cargoes.

A concerted effort should also be undertaken, cooperatively, to obtain broad acceptance of realistic requirements, and the enforcement thereof.

This organization should be thoroughly representative in its composition. It should be charged with the responsibility of making direct recommendations to affected Federal, State and local highway authorities, enforcement officials, and the appropriate organizations representing railroads, motor carriers, and carriers of hazardous materials. It should have authority to make or arrange for the making of studies to evaluate the causes of grade-crossing accidents as a basis for preventive measures, to make recommendations to legislative bodies such as State legislatures, to consult experts, to make recommendations with respect to standards which would lead to elimination of grade crossings in particular cases, to the installation of specific types of grade-crossing protection devices, to the designation and proper identification of infrequently used grade crossings where vehicular traffic will be exempted from the requirement to stop before proceeding over the crossing and with respect to closing of particular crossings to heavily loaded commercial vehicles by reason of difficulty in negotiating grades, extremely restricted sight distances and other complicating elements in relation to the nature and density of railroad and highway traffic.

2. The Congress should give serious consideration to the enactment of legislation to provide public funds for the installation and maintenance of signals, lights, gates, or other protective devices intended to prevent accidents at rail-highway grade crossings. Such funds should be used to defray the costs of such installations and maintenance under some equitable arrangement between the users of the crossing.

3. In order for more effective enforcement of existing safety regulations at grade crossings, the State legislatures should give consideration to enactment of or amendment of existing laws or regulations to provide that highways cannot be used in interstate commerce except in compliance with this Commission's regulations so that a violation of the latter would also be a violation of the State laws or regulations and enforceable by the State authorities, as well as by this Commission.

4. State legislatures in addition to the inauguration of an intensified program to enforce all of its grade-crossing regulations, should consider the adoption of rigid driver licensing laws and regulations for operators of motor vehicles transporting dangerous commodities and whenever possible, require such vehicles to be rerouted over grade crossings located outside of congested areas where hazards are at a minimum.

5. State and local authorities responsible for the selection of schoolbus drivers and the operation of schoolbuses, should carefully investigate and screen all applicants respecting their character, competence, and responsibility.

6. The railroads take prompt action to improve maintenance of railroad rights-of-way at grade crossings to provide safer passage for motor vehicles and remove all sight obstructions so as to provide adequate sight distances for motor vehicle operators and traincrews.

7. The railroads establish adequate, uniform warning time of not less than 20 seconds to operators of motor vehicles of the approach of trains to grade crossings.

8. This Commission and State and local authorities make an intensified and cooperative effort immediately to enforce all laws and regulations in effect at

rail-highway grade crossings paying particular attention to those applicable to motor vehicles transporting flammable and other dangerous commodities.

9. This Commission proceed to a conclusion with its rulemaking proceeding instituted by Notice of Proposed Rule Making dated May 4, 1961, in docket No. 3666, notice No. 50 providing for the placarding, reporting, and registration of motor vehicles operated by private carriers engaged in the transportation of explosives and other dangerous commodities in interstate or foreign commerce.

10. This Commission revise its rail-highway grade-crossing accident reports so as to provide a more detailed and informative description of the cause of each accident.

11. Since some of these recommendations entail extensive policing of laws and regulations, and if adopted, will expand this Commission's duties, Congress may desire to give serious consideration to an increase in this Commission's personnel so that compliance with safety laws and regulations can be adequately policed.

On exceptions the American Trucking Associations, Inc., and the National Tank Truck Carriers, Inc., hereinafter sometimes referred to as the ATA and NTTC, respectively, contend that the examiner erred (1) in concluding that the Commission has no jurisdiction over railroads with respect to rail-highway grade-crossing matters, (2) in his findings and conclusions regarding the causes of grade-crossing accidents, (3) in failing to find a need for Commission regulation of the speed of trains operating over rail-highway grade crossings, (4) in failing to find a need for Commission regulation in the matter of train brake performance tests and stopping distance criteria, (5) in failing to find a need for Commission regulation of uniform train warning time to be given at rail-highway grade crossings, (6) in failing to find a need for Commission regulation establishing comprehensive physical and mental qualifications for railroad operating employees, (7) in failing to find a need for Commission regulation requiring reflectors or reflectorized material on the sides of train equipment, (8) in failing to find a need for Commission regulation requiring adequate maintenance of railroad rights-of-way at grade crossings, (9) in failing to find a need for Commission regulation establishing uniform standards for grade-crossing protective devices, (10) in finding that present safety regulations have not been shown to be deficient and that such regulations are reasonably adequate, (11) in not finding a need for any additional legislation necessary to permit adequate regulation of train operations over grade crossings, (12) in failing to find a need for Commission review of the role of the Bureau of Safety and Service in grade-crossing accident investigation and prevention, and (13) in recommending

consideration of legislation respecting the cost of grade-crossing protection.

The Central Committee on Highway Transportation of the American Petroleum Institute contends on exceptions that the examiner erred (1) in finding that the cost of installing and maintaining protective devices at grade crossings should be financed with public funds, (2) in finding that private carriers be required to register with the Commission and placard their vehicles with their names or trade names, (3) in failing to recommend after the creation of an advisory body organization by Congress or an Executive order that its responsibilities be developed and circulated to all interested parties prior to adoption so as to avoid confliction or duplication as to existing responsibilities and activities of other organizations, (4) in failing to clearly define and differentiate between motor carriers that are economically regulated by the Commission and those which are regulated only as to safety, (5) in recommending State adoption of rigid driver licensing laws for operators of motor vehicles transporting dangerous commodities, (6) in failing to include in the recommendation that railroads should improve maintenance of railroad rights-of-way at grade crossings an additional recommendation that inspection and clearing of rights-of-way be continued, including that beyond the railroad property by State or local highway jurisdiction, (7) in failing to include in the recommendation that a uniform warning time of not less than 20 seconds be established at grade crossings, a requirement that wherever practicable such warning time be of greater duration than 20 seconds and that the warning be given by a clearly audible signal, (8) in finding that an intensified effort be made to enforce all laws and regulations at grade crossings, particularly with respect to motor vehicles transporting flammable and other dangerous commodities, and (9) in failing to include in the recommendation that the Commission should revise its rail-highway grade-crossing accidents, a more detailed and informative description of the cause of the accidents, and a requirement that such reports should be complete and impartial.

On exceptions, the Private Carrier Conference, Inc., of the American Trucking Associations, Inc., alleges that the examiner erred in finding that private carriers are involved in many of the rail-highway grade-crossing accidents and it is difficult to locate or identify them and that for this reason they should be required to register with us and have their vehicles placarded

with their names or trade name. This same exceptant also contends that the examiner erred in recommending that we proceed to a conclusion, the rulemaking proceeding, in docket No. 3666, notice No. 50 relating to the placarding, reporting and registration of motor vehicles operated by private carriers engaged in the transportation of explosives and other dangerous commodities in interstate or foreign commerce.

The Bureau of Inquiry and Compliance, Interstate Commerce Commission, directs its exceptions to the failure of the examiner (1) to recommend amendment of the Commission's Motor Carrier Safety Regulations (49 C.F.R. 190-197) particularly section 192.10, to require the stopping at railroad grade crossings not only of vehicles which are presently required to stop by the regulations, but also vehicles which are used to transport in bulk, whether loaded or empty, commodities which have a particular fire hazard, but which are not classified as flammable under existing regulations of the Commission, i.e., tank vehicles laden with, or used for the transportation, whether loaded or empty, of liquids having a flash point below 200° Fahrenheit and (2) failure to recommend, as a national standard, the concept of identifying certain rail-highway grade crossings as "exempt" crossings.

In their reply to the exceptions of the ATA and NTTC, railroad respondents disagree with exceptants' argument that "the controlling element in grade crossing accidents is the unregulated, uncontrolled operation of trains through those crossings in complete disregard of the safety of the highway traveling public." Respondents also disagree with exceptants' contention that the examiner committed a basic error of law regarding this Commission's jurisdiction over railroads with respect to rail-highway grade-crossing matters. Respondents further contend that the gravamen of the ATA and NTTC exceptions are found in the following statement:

> As hereafter more fully discussed our quarrel with certain of the examiner's findings and conclusions with minor exceptions is not based on any failure of the examiner to consider the evidence of record but rather arises from what we submit as a basic error of law in his findings and conclusions regarding the Commission's jurisdiction.

In arguing that the examiner reached a proper conclusion regarding the Commission's jurisdiction, railroad respondents point out that sections 1 (10) and 1 (21) of the Interstate Commerce Act cannot be construed so broadly as to vest in this Commission the broad jurisdiction contended by exceptants.

Railroad respondents in their reply to all the exceptions filed in this proceeding contend that there is no merit in any of these exceptions; that the examiner's findings, conclusions, and recommendations are fully supported by the law and by the evidence of record and no error is contained therein.

The evidence adduced, the examiner's recommendations, the briefs, the exceptions, and replies have been considered. We find that the examiner's statement of facts is correct in all material respects, and, as hereinafter supplemented, or revised, we adopt it as our own. Matters raised on exceptions or in replies thereto not specifically discussed herein have been considered and found to be without merit.

By a petition filed May 11, 1960, the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors and Brakemen, the Brotherhood of Railroad Trainmen, and the Switchmen's Union of North America requested the institution of a general investigation to determine what action should be taken by this Commission to prevent collisions between railway trains and motor vehicles engaged in the transportation of petroleum, petroleum products, and similar dangerous inflammable liquids. Upon denial of such petition by the Commission on August 15, 1960, the above petitioners filed a petition for reconsideration on September 20, 1960, following which the Commission entered its order of February 6, 1961, instituting this proceeding on its own motion into and concerning accidents at railroad-highway crossings involving railway trains and highway motor vehicles transporting liquid petroleum and liquid petroleum products, explosives, flammable or oxidizing liquids and solids, flammable or poisonous compressed gases, volatile liquids and solids which emit poisonous fumes, corrosive liquids, and radioactive materials, for the purpose of determining what safety requirements can or should be made, within the authority of this Commission; what additional legislation may be necessary, and for the further purpose of focusing public attention on the gravity of the safety problem occasioned by collisions at railroad crossings between railway trains and such motor vehicles.

The order of February 6, 1961, instituting this investigation made all railroads and all carriers by motor vehicle subject to this Commission's Safety Regulations, respondents in the proceeding; invited the participation in the proceeding of State regulatory commissions and State, county, and municipal authorties having jurisdiction over railroads or motor vehicle operations

with respect to safety of operation, railroad and motor carrier associations, railway and motor carrier labor organizations, and other interested parties; and authorized and directed the Bureau of Inquiry and Compliance, Interstate Commerce Commission, to participate, as a party to the proceeding and to present evidence and make representations on the issues involved.

Subsequent to the institution of this proceeding, the Commission, on May 4, 1961, issued a notice of proposed rulemaking in docket No. 3666, notice No. 50 proposing the issuance of regulations requiring private carriers by motor vehicles engaged in the transportation of the same commodities embraced in the instant proceeding in interstate or foreign commerce, to file certain reports showing the following information:

(1) The average number of trucks and tractors operated in interstate or foreign commerce;

(2) The names of all states in or through which those vehicles were operated; and

(3) The number of accidents in which those vehicles were involved wherein bodily injury, death, or property damage to the extent of $250.00 or more, resulted.

In addition, the notice provided that such private carriers be required to display on both sides of each vehicle, the name or trade name of the carrier operating such vehicle and the city or community in which such carrier maintains its principal business office.

By an order dated May 16, 1961, the proceeding in docket No. 3666, notice No. 50, was assigned for hearing jointly with the instant proceeding. Thereafter, in response to petitions for severance of these two proceedings, for reconsideration, and for broadening of the issues involved in the instant proceeding, an order was entered on September 13, 1961, amending the order of February 6, 1961, by broadening the investigation herein to include all accidents at railroad-highway crossings involving trains and highway motor vehicles regardless of the nature of the commodities transported. The order of September 13, 1961, also granted the petitions for severance of the two proceedings. We have for consideration here, those issues involved in docket No. 33440. Hearings have been held. Pursuant to the Cooperative Agreement between the Interstate Commerce Commission and State Commissioners of May 3, 1922, as revised October 14, 1925, and as further supplemented and adopted on August 31, 1937, this

proceeding was made a cooperative proceeding within the terms of the above agreement. Accordingly, the Virginia State Corporation, Virginia State Corporation Commission, the Massachusetts Department of Public Utilities, the Minnesota Railroad and Warehouse Commission, and the Nevada Public Service Commission were represented at the hearings.

There were numerous preliminary pleadings; a prehearing conference; 20 days of hearings; the presentation by 79 separate witnesses of written and oral statements and 179 exhibits and 3,007 pages of transcript.

The evidence presented at the hearings consisted of statistics relating to the number and seriousness of rail-highway grade-crossing accidents in the past compared with the present; the extent to which protection has been afforded at such crossings and what action should be taken to afford better protection; on whom the cost burden should fall for the installation of improved protection; and what additional regulations, if any, should be inaugurated to solve the grade-crossing accident problem. Evidence was presented showing the activities of certain groups such as railroads, State regulatory commissions, motor carriers, bus operators, distributors of flammable commodities, and other safety-conscious associations in grade-crossing accident prevention. Views and opinions were expressed by numerous witnesses as to the action that should be taken to solve the grade-crossing problem. Specific recommendations for the Commission's consideration were presented by railroad respondents, the American Trucking Associations, Inc., the National Tank Truck Carriers, Inc., the American Petroleum Institute, and the Commission's Motor Carrier Safety witness. Several representatives of State regulatory Commissions appearing in behalf of railroad respondents testified regarding safety programs inaugurated by such Commissions and steps taken to afford better protection at grade crossings to reduce the appalling number of accidents at such crossings.

Since the days of early railroading the public and the operators of trains have had before them the problem of reducing or minimizing the dangers ever present at rail-highway grade crossings. In later years with the tremendous increase in vehicular traffic, this problem has been amplified to a point where it is now the concern of all safety-minded persons. Notwithstanding the elimination of grade crossings by the more recent construction of grade separation structures on main highways, the crossing hazard is

still present at many thousands of crossings. As of December 31, 1959, for which latest figures are available, there were 224,547 grade crossings in the continental United States. This grade-crossing hazard has become more pronounced in expanding residential or industrial areas where rural roads or suburban streets now carry heavy volumes of traffic across major rail lines at grade. The familiar "crossbuck" sign is not heeded by many operators of motor vehicles and is no longer adequate protection at grade crossings. Better protection is needed. While flashing signals, automatic gates, and other warning devices are extensively used, they are not considered positive restraining devices since experience has shown that their effectiveness is limited. As an example, there are approximately 2,821 rail-highway grade crossings in New Jersey of which 1,140 are protected by automatic signals, other audible or visible signals, or flagging, yet during 1960 there were 67 accidents at crossings so protected while at the remaining crossings where similar protection is not present, there were 72 accidents. Other similar statistics can be cited.

In view of the limited effectiveness of protective devices at rail-highway grade crossings other means must be found to deal with the problem of reducing or eliminating the hazard at such crossings. The ideal solution would be the separation of rail-highway grades by the relocation of the highway or the railway. This however, is impracticable because of the heavy expense involved. The estimated cost of separating the more than 200,000 rail-highway crossings at grade in the United States is $86,119,119,000. The average net investment in class I railroads in the United States for 1960 is estimated to be $27,470,000,000. Thus the estimated cost of separating all rail-highway crossings at grade would be 3.1 times the total net investment in the class I railroads or equal to 130 times the average annual net income of class I railroads since World War II.

Since the separation of rail-highway grades is too costly and the effectiveness of protective devices at crossings is limited, those charged with the duty of seeking a solution to the crossing problem began to search for other means of reducing or eliminating the hazards at crossings. Before any definite action could be taken in this respect consideration had to be given to a number of basic elements such as accident causation, determination of the type of facility or action needed to induce safe movements over grade crossings, a determination of the benefits derived from grade-

crossing protection as between the railroads and the public, and the extent to which the costs should be borne by those benefited by such protection. From the start it was necessary to educate the public to the need for the exercise of care and observance of the laws and regulations applicable to grade crossings in order that human errors and misjudgments could be made less likely and less hazardous. It was also necessary to make the public realize that the principal basis of demand for rail-highway crossing improvements or elimination is a public safety and not a demand for greater conveniences in highway travel. There has been no change in the fundamental aspects of the grade-crossing problem and as long as the riding public and other industries are involved, the problem of providing adequate protection at rail-highway grade crossings becomes a part of the bigger national traffic safety problem, especially with respect to the need for education and enforcement.

One of the earliest organizations to take an active interest in this field was the National Safety Council which was organized in 1913. Railroad safety men were among the organizers. Since public safety was a matter of concern to the railroads the council worked with them in an effort to reduce the toll of rail-highway accidents. At that time trespassing accidents were the matter of greatest concern to the railroads in the public safety area. In 1915 the railroad section of the National Safety Council established a committee on grade-crossing and trespassing accidents to cope with the problem of collisions between automobiles and trains since this was then becoming a serious problem. For the year ended June 30, 1914, there were 1,147 persons killed and 2,935 injured at railroad crossings and 5,471 killed and 6,354 injured while trespassing on railroad property.

During the period from 1915 to 1924 inclusive, the National Safety Council was engaged in numerous activities as a part of its safety program which included (1) Studies of legislation needed; (2) Community studies and organized support action; (3) Driver observation programs; (4) Safety education through talks and distribution of literature in schools; (5) Standardization of signs and signals; (6) Cooperation of public authorities in reducing the number of crossings; (7) Establishment of joint study committees; (8) Passage of uniform grade crossing laws; (9) Distribution of literature through public agencies; (10) Several statewide grade-crossing accident prevention campaigns; (11) Formation of permanent State safety organizations; and (12)

cooperation in the development of a uniform traffic code. With the advent of the radio a new media was used for these activities.

In 1924 through the efforts of the United States Chamber of Commerce and the National Safety Council, the first "Hoover Conference" as it was often called, was held. Delegates from all parts of the country and all interested agencies, official and other, adopted a series of reports and as a result a uniform vehicle code was brought into existence which is a model for traffic laws in every State. It is a document published by the National Committee on Uniform Traffic Laws and Ordinances which is used extensively by the legislatures of the States as a guide in drafting statutes or amendments. It provides, among other things, that the driver of any motor vehicle carrying explosive substances or flammable liquids as a cargo, or a part of a cargo before crossing at grade, any track or tracks of a railroad must stop such vehicle. This code is in existence today and is revised periodically to meet changing conditions.

Due in no small measure to the efforts of the National Safety Council, the safety campaigns in time began to bring results as evidenced by a decrease in the number of accidents, fatalities, and injuries at grade crossings. In 1928 there were 5,800 accidents resulting in 2,568 fatalities and 6,667 injuries. By 1932 there was a reduction of approximately 40 percent with a total of 3,499 accidents, 1,526 persons killed, and 3,989 injured.

In 1953 the National Safety Council was chartered by the Congress of the United States to concentrate its full time on the prevention of accidents. The council's charter imposes an obligation that the council operate as a nonprofit, nonpolitical corporation. It has worked with State departments and railroad officials on numerous pilot studies and programs where unfavorable experiences indicated a need for greater emphasis and has been instrumental in bringing about more favorable results. For example, Georgia was greatly concerned with its increase in grade-crossing accidents and invited the council for a solution of its problem. A vigorous public education program was instituted which resulted in a reduction of 27 percent in the number of grade-crossing deaths in Georgia in 1943 over those in 1942. A similar program was instituted in Ohio by which it was able to reduce its fatalities by 32 percent in 1961. Other instances were cited where such prevention programs resulted in similar improvements.

BASIC CAUSES OF ACCIDENTS

The National Safety Council in cooperation with 48 State accident record bureaus made a survey and study during the World War II period to determine the basic causes of crossing accidents. It was found that the 10 most common reasons or causes for such accidents were:

(1) The motorist sees the train approaching but misjudges its speed. He thinks he can get across but fails.

(2) The motorist waits for one train to clear the crossing and then immediately starts across but is struck by another train approaching from the opposite direction.

(3) The driver converses with other people in his car and his attention is distracted from the safe operation of the car.

(4) The motorist sees other cars standing at the crossing, obviously waiting for a train to pass, but heedlessly drives around them into the path of the approaching train.

(5) The motorist is so familiar with the crossing having passed over it hundreds of times that he uses no caution whatsoever. A case where familiarity breeds contempt.

(6) The motorist uses only one hand on the steering wheel, the other arm otherwise being occupied. Under such circumstances his mind is not primarily concerned with driving safely.

(7) The motorist has defective eyesight, defective hearing or both, or is otherwise physically or mentally deficient and should not be licensed to drive a car.

(8) The motorist has too much alcohol in his system and is incapable of determining what should or should not be done while approaching the crossing.

(9) The motorist, driving at night as well as in locations with which he is not familiar, drives at a speed too great for such circumstances. Consequently, he cannot stop in time when a railroad crossing appears ahead. The result is that he drives into the side of a train.

(10) The motorist drives a car with faulty brakes or other defects and is unable to stop or start at the proper time or stalls his car on the crossing.

From the foregoing it is seen that the motorist must blame himself for a greater part of the tragic and costly accidents at rail-highway grade crossings. The driver of the family automobile is involved in 73 percent of grade-crossing accidents while commercial vehicles are involved in only 19.4 percent.

The Central Committee on Highway Transportation of the Division of Transportation of the American Petroleum Institute also made extensive studies of the causes of grade-crossing accidents and concluded that the following were the main causes:

1. Improper crossing markers. — Vehicle drivers do not have sufficient time to slow down in order to take precautionary steps because the crossing warning signs are too close to the tracks, are not illuminated and do not stand out so as to clearly indicate a railroad crossing hazard.

2. Insufficient automatic crossing protection.-- In many instances there has been a lack of sufficient or effective notice to the vehicle driver that a train is approaching or occupying a rail-highway grade crossing.

3. Aside from signal time, the high speed of trains at unprotected crossings has further contributed to the cause of accidents invqlving petroleum-carrying vehicles.

4. Trains have substituted the horn type for the steam whistle and it is believed that this change has lessened the efficiency of whistle signals because the lower pitch of the typical diesel horn is not as penetrating as a high pitched whistle.

5. Ineffective lighting of crossings or trains is a contributing cause of accidents.

6. Improper maintenance of crossing signs and signals, locomotive signal equipment, and highways at crossings.

7. Insufficient time warning of automatic signals at crossings because the signals are not properly regulated for the varying speeds at which trains are operated. Also the effectiveness of signals is seriously impaired by local train low speed or switching operations which tie up crossings protected by automatic signals for unreasonably long periods thereby encouraging bad crossing practices by some motorists who want to avoid unreasonable delays.

8. Inadequate control of vehicular traffic is a contributor to accidents because many municipalities force trucks to be channeled to routes which, for the most part, traverse industrial areas, thereby causing a backlog of vehicles moving over numerous railroad crossings.

9. Driver carelessness and failure to take precautionary measures contribute to the cause of rail-highway grade crossing accidents.

In 1947 the National Safety Council launched its nationwide education effort to focus public attention on the importance of knowing and obeying traffic signs, signals, and pavement markings. In support of this effort, it presented its "Signs of Life Program" consisting of pamphlets, posters, traveling exhibits, and movies. The council's then president very ably stated the reason for undertaking this program when he said:

> Carefully designed and properly placed, traffic signs give us a definite message which contributes vitally to the safety and comfort of our journey. Unfortunately, we often take traffic signs for granted as standard roadside "trimming" as we drive along. If, however, we recognize their true purpose, realize that they are solely for our benefit, and observe them intelligently, the guidance and protection that they offer is invaluable.
>
> In the belief that an aggressive campaign to secure greater recognition of these valuable aids to the motorist will have a beneficial effect on the prevention of traffic accidents, the National Safety Council is inaugurating the "Signs of Life" campaign.

Through the Signs of Life Program the public must be made to realize clearly the true purpose of traffic signs and signals so that they will have a sympathetic understanding of the need for observance. They must know exactly what the various signs and signals mean. Finally, there must be awakened in every driver and every pedestrian a sense of personal responsibility so that he will not only heed signals and signs but will drive and walk more carefully under all circumstances in order that we may achieve a drastic reduction in the accident toll on our streets and highways.

Psychologically, most drivers today have greater fear of violating a highway sign because they know that observance of such a sign will be enforced, but there is some question in their minds as to whether the highway patrolman has any authority to enforce a violation of a crossbuck sign. This is one of the reasons advanced by some authorities that crossbuck and railroad crossing signs be replaced with highway signs and their observance strictly enforced.

Many railroads actively participate in education and safety programs to further the reduction of hazards and to increase safety at grade crossings. Safety films are used for this purpose. For example, the Southern Pacific Company in cooperation with the National Safety Council and the California Highway Patrol produced and sponsored a motion picture, among others, entitled "The Lost Picnic" which was shown extensively by this carrier and by other industries, schools, and civic and Federal groups throughout the United States, Canada, and Mexico for the purpose of impressing the urgent need for observance of warnings at grade crossings. The promotion of educational and safety programs, installation of safety devices at crossings, and oscillating headlights on locomotives and cooperation between the railroads and such enforcement organizations as local and State police in the reporting of violations of motor vehicle codes governing movements over rail-highway grade crossings are typical of the efforts exerted by many railroads in attaining the objective of eliminating or minimizing the dangers and hazards associated with grade crossings.

Another example of the active educational programs instituted by railroads is that of the Delaware and Hudson Railroad Corporation. For many years this carrier has been actively engaged in grade-crossing protection work but in 1953 this program was intensified. As a part of this program it presented many safety films to school children and civic groups, and broadcast safety programs over the local radio station appealing to the general

public to exercise extreme care when approaching grade crossings. The attendance at grade and high schools where 492 safety meetings were held in 1959 was about 13,700. The estimated exposure to each of the programs broadcast was estimated at about 200,000 persons.

While this proceeding deals with a very serious problem it is nevertheless a small part of a much greater problem. The national figure shows that only 3.6 percent of the accidents in the United States result from collisions with railroad trains while a little over 96 percent of the accidents are disassociated from railroad operations. During 1961 there were 3,204 accidents at rail-highway grade crossings in the United States resulting in 1,291 persons killed and 3,514 injured. This includes all types of accidents at such crossings. Notwithstanding these awesome statistics there has been a steady improvement with respect to the number of grade-crossing accidents since 1941. In that year there were 3,035 passenger automobiles, 14 motorbuses, and 825 motortrucks or a total of 3,874 accidents at grade crossings involving collisions between these types of vehicles and trains. By 1950 this figure was reduced to a total of 3,662 accidents and by 1960 further reduced to 2,966 accidents. However, this is still a shameful reflection on the driving habits of many motor vehicle operators.

The following table contained in statement No. 6207 compiled and issued by the Commission's Bureau of Transport Economics and Statistics shows the rail-highway accidents and resulting casualties for the years 1960 and 1961:

TABLE 1.—*Rail-highway accidents, and resulting casualties in the years 1961-60*

Cause of accident	Accidents				Killed				Injured			
	1961		1960		1961		1960		1961		1960	
	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total
Trains striking or being struck by:												
Pedestrians	151	4.71	134	4.19	101	7.82	87	6.38	53	1.51	48	1.40
Passenger automobiles	2,271	70.88	2,332	72.99	919	71.19	964	70.67	2,541	72.31	2,505	73.16
Motorbuses	10	.31	13	.41	24	1.86	13	.95	42	1.20	85	2.48
Motortrucks	633	19.76	621	19.44	225	17.43	277	20.31	705	20.06	687	20.07
Motorcycles	17	.53	14	.44	5	.39	7	.51	13	.37	10	.29
Other vehicles or machines	46	1.44	29	.91	14	1.08	6	.44	73	2.08	24	.70
Pedestrians passing over or under cars	7	.22	4	.12	1	.08	2	.15	6	.17	2	.06
Miscellaneous	69	2.15	48	1.50	2	.15	8	.59	81	2.30	63	1.84
Total	3,204	100.00	3,195	100.00	1,291	100.00	1,364	100.00	3,514	100.00	3,424	100.00

TABLE 2.—*Rail-highway accidents involving collisions of motor vehicles, by nature of collision, year ended December 31, 1961-58*

	Total number of accidents				Persons							
					Killed				Injured			
	1961	1960	1959	1958	1961	1960	1959	1958	1961	1960	1959	1958
Motor vehicle:												
Struck by train	1,866	1,895	1,831	1,864	864	935	789	842	1,964	2,064	1,904	1,932
Ran into side of train	1,065	1,085	1,011	991	309	326	284	299	1,337	1,223	1,235	1,113
Total	2,931	2,980	2,842	2,855	1,173	1,261	1,073	1,141	3,301	3,287	3,139	3,045

The above tables show that during 1961 collisions between trains and motor vehicles numbered 2,931 of which 2,271 involved passenger automobiles, 10 involved motorbuses, 17 involved motorcycles, and 633 involved motortrucks. The number of vehicles including passenger automobiles, buses, trucks, and motorcycles struck by a train was 1,866 while 1,065 ran into the side of a train. Those occurring during the daylight hours numbered 1,708 while 1,223 occurred after dark. During the daylight hours 1,265 of these vehicles were struck by a train while 601 were struck during darkness. With respect to the number of these vehicles running into the side of a train the record shows that 443 of these accidents occurred during the daylight and 622 occurred after dark.

The speeds of both trains and motor vehicles were not significant in these accidents. Of the total of 2,931 grade-crossing accidents in 1961, including freight, passenger, and yard (switching) trains involved in rail-highway accidents, the overall train speed in the largest number of these accidents, as shown in the above table, ranged between 1 and 9 miles per hour. Further detailing these accidents it is noted that as to freight trains, the greatest number of accidents, or 394, occurred where the speed of the train was between 20 and 29 miles per hour; as to yard and switching trains, the greatest number of accidents, or 244, occurred at speeds between 1 and 9 miles per hour, but as to passenger trains the greatest number, or 197, occurred where the speed of the train was 70 or more miles per hour. It is also significant to note that 106 of the total of 2,931 accidents occurred while the train was immobile. Reference is made to table No. 13 in statement No. 6207 in this respect showing the following:

TABLE 13. – *Rail-highway accidents involving motor vehicles, subdivided according to the speed and kind of train involved, year ended December 31, 1961*

Speed of train (miles per hours)	Total number of accidents	Struck by train		Ran into side of train		Kind of Train					
		Number occurring		Number occurring		Freight		Passenger		Yard (switching) and other	
		Daylight	Dark	Daylight	Dark	Number	Percent of total	Number	Percent of total	Number	Percent of total
Standing	106	------	------	5	101	65	3.52	1	0.15	40	9.62
1 -9	539	101	134	70	234	275	14.87	20	3.00	244	58.65
10 -19	484	182	143	63	96	348	18.82	36	5.41	100	24.04
20 -29	480	220	92	89	79	394	21.31	70	10.51	16	3.85
30 -39	426	222	68	87	49	334	18.06	79	11.86	13	3.12
40 -49	368	212	56	56	39	282	15.25	79	11.86	2	.48
50 -59	293	118	34	34	17	125	6.76	78	11.71	------	------
60 -69	129	75	36	17	1	23	1.24	106	15.92	------	------
70 and over	198	134	38	22	4	1	.06	197	29.58	------	------
*Not reported	5	1	------	------	2	2	.11	------	------	1	.24
Total	2,931	1,265	601	443	622	1,849	100.00	666	100.00	416	100.00

It is of particular interest to note that while rail-highway grade-crossing accidents involving motortrucks were only about one-fourth as frequent as those involving passenger automobiles, there was a total of 51.5 accidents per million motortrucks registered in 1961 as compared with 35.9 for passenger automobiles.

Average weather conditions do not appear to be significant in these accidents since most of them occurred during clear weather as indicated below:

Weather	Total number of accidents		Struck by train		Ran into side of train	
			Number occurring		Number occurring	
	Number	Percent of total	Daylight	Dark	Daylight	Dark
Clear	1,941	66.22	858	404	286	393
Cloudy	558	19.04	264	106	77	111
Rain	266	9.08	89	53	60	64
Snow, sleet, or hail	99	3.37	40	28	16	15
Fog	67	2.29	14	10	4	39
Dust						
Smoke						
Not reported						
Total	2,931	100.00	1,265	601	443	622

During the 5-year period from 1952 to 1956 there were 18,088 grade-crossing accidents and for the following 5 years from 1957 to 1961 there were 16,142 such accidents making a total of 34,230 accidents for the 10-year period. For the first 5-year period there were 6,988 persons killed and 18,914 injured. For the second 5-year period there were 6,500 persons killed and 17,113 injured. The annual average for the 10-year period were 3,423 accidents, 1,348.8 killed, and 3,602.7 injured. The trend in accidents and injuries started down with the passage of the Safety Appliance Acts and has continued downward for decades, but is still a very serious problem.

From the evidence presented in this proceeding it is apparent that the grade-crossing problem calls for more than a casual glance from those driving automobiles, trucks, buses, or other motor vehicles or those operating trains. The need for realistic progress in moving traffic more safely and reducing hazards at grade crossings is intensified when attention is called to the increase in motor vehicle registration and increase in highway

construction. In 1947 there were 37,482,000 motor vehicles registered in the United States. By 1960 this number increased to 74,084,000 of which 12,000,000 were trucks. Nearly 1,750,000 of these are engaged in intercity operations and are operated by more than 130,000 motor carriers subject to the jurisdiction of the Interstate Commerce Commission. The total motor vehicle-miles operated were not available for 1947, but in 1946 they amounted to 340.9 billion and by 1960 they had increased to 718.8 billion or an increase of 110 percent. On the other hand train-miles operated in 1947 decreased from 1,031,000,000 to 657,850,000 or a decrease of 36 percent.

Notwithstanding, the phenomenal increase in motor vehicle registrations and motor vehicle mileage thereby increasing the exposure to accidents, remarkable success has been achieved in highway and grade-crossing safety. For example, a total of 28,076 motor vehicle deaths occurred on the highways in 1945, or a death rate of 11.3 per 100 million vehicle-miles. Although the motor vehicle deaths in 1960 increased to 38,200 the death rate decreased to 5.3 per 100 million miles for that year. The improvement respecting grade-crossing accidents was even greater as evidenced by a decrease in the death rate of 0.7 per 100 million vehicle-miles in 1945 to 0.2 per 100 million vehicle-miles in 1960. Deaths from collisions of motor vehicles with railroad trains in 1945 represented 6.1 percent of total highway deaths, but this percentage had been reduced to 3.6 by 1960. These statistics disclose that while total highway deaths increased 38.9 percent in 1960 over 1945, such deaths at grade crossings decreased 23 percent and while the highway death rate per 100 million vehicle-miles decreased 53 percent such death rate at grade crossings decreased 71 percent. The percentage of total highway deaths represented by deaths at grade crossings decreased 41 percent.

FEDERAL AID HIGHWAY ACT

Since the highways are an important part of the grade-crossing problem some consideration should be given to their cost, construction, and the part they play in providing safety at grade crossings. Under the Federal Aid Highway Act, 23 USC, 101 et seq. Federal funds are made available for highway projects and elimination of grade-crossing hazards. The normal Federal pro rata share in projects involving the elimination of such hazards

is 50 percent in cases where the projects involve primary, secondary, or urban funds. Where the project is in a State involving a large public land area the 50-percent pro rata share is increased proportionately depending on the public land area of the State. In the case of interstate projects the Federal pro rata share is 90 percent and can be increased up to 95 percent depending on the public land area of the State involved. Under certain conditions the Federal Government will pay 100 percent of the cost of construction of projects for the elimination of hazards at rail-highway crossings which include separation of protection of grades at crossings, reconstruction of existing railway grade-crossing structures, and the relocation of highways when such relocation is for the purpose of eliminating a grade crossing. The act also provides that the Secretary of Commerce may classify the various types of projects and may set for each classification a percentage of the cost of the construction that shall be deemed to be of benefit to the railroad, but this benefit shall not exceed 10 percent which is the maximum that can be assessed against the railroad. Once any highway or highway project constructed with Federal aid highway funds needs repairs, the responsibility for such repairs or maintenance falls on the States rather than on the Federal Government and in the event any State fails to properly maintain such a project, the Secretary of Commerce is vested with authority to withhold approval of further projects.

During the period from 1934 to 1960 the Bureau of Public Roads participated in the reconstruction of 1,100 structures, elimination of nearly 7,000 crossings, and the protection of nearly 10,000 crossings. The total expenditure for these projects was $1,454,592,022 of which $1,168,414,328 was paid for from Federal funds. The difference of approximately $286,000,000, consisted of funds contributed by the States, railroads, or from sources other than Federal funds as their share of the projects. As of December 1959 there were 3,510,600 miles of public thoroughfares including streets and highways in the United States. Of this total more than 40,614 miles were interstate, 264,608 were primary, and 589,686 miles were secondary systems. A total of 854,294 miles comprise the Federal Aid Highway System on which Federal funds may be expended for highway purposes. The remaining 2,656,366 miles of roads and streets are not on the designated Federal aid system and therefore are not eligible for Federal aid highway improvement, and improvements thereon are financed by the State, county, township, or city governments. Thus, about 75 percent of the

highway and street mileage on which grade-crossing problems arise are not within the category of Federal aid projects.

Class I railroads and switching and terminal companies operate a total of 227,112 miles of track in the United States. Since there are 224,547 rail-highway crossings in the United States, there is an average of one crossing at grade at approximately every mile of railroad operated by class I, and switching and terminal railroads.

The first survey made by the Bureau of Railway Economics of the Association of American Railroads covering the period of 1949 through 1954 discloses that the railroads spent $7,466,081 for separation projects on Federal aid system projects. The total expenditure during that period for these projects was $75,447,712. On non-Federal aid separation projects during this same period, the railroads paid $34,637,318 of a total of $111,984,435.

The second survey made by the Association of American Railroads covered the period from 1955 through 1959. During this period the railroads paid $10,155,835 of a total cost of $114,455,109 for Federal aid railroad-highway separations. For the same period the railroads paid $39,399,470 of a total cost of $157,096,652 for similar separations on non-Federal aid highways.

Two surveys were made by the Association of American Railroads of railroad expenditures for the installation of railroad-highway grade-crossing protection devices. The first survey covered the period from 1948 through 1954. On Federal aid projects the railroads paid $4,879,147 of a total cost of $16,727,307 for the installation of such devices.

Of a total of $53,238,762 spent for such devices on non-Federal aid projects for the same period, the railroads paid $46,801,715. The second survey covered the period from 1955 through 1959. The total cost of such installations on Federal aid rail-highway grade crossings was $16,140,289 of which $3,393,867 was paid by the railroads. On non-Federal aid protection projects at rail-highway grade crossings for the same period the railroads spent $35,193,938, the total cost of which was $43,742,825.

It is difficult to definitely ascertain the cost of maintaining automatic warning devices because of the various types of crossings protected, such as single track, double track, or multiple tracks, damage to such devices by highway traffic, number and width of highway traffic lanes, location of the devices in relation to railroad maintenance headquarters, and other reasons.

Similarly, the annual maintenance cost would vary depending on whether the crossing was protected by a watchman, flashing signals only, or flashing lights with gates, and the type of crossing protected. Based on an average cost of $900 per year per crossing, the annual maintenance cost for maintaining crossing protection devices on the 41,487 crossings protected by lowered gates, flagging protection by trainmen or watchmen, audible or visible signals, or audible and visible signals, would be approximately $37,338,000.

EVALUATION OF STATES' PART IN SAFETY PROGRAM

Some States have taken the position and have passed legislation to relieve in part the railroads' burden of the cost of grade separations, and where formerly these costs were divided equally between the railroad and the State, more recent trends have been to limit the railroads' share of the costs not to exceed 15 percent. Many States participating in this proceeding hereinafter referred to, submitted evidence regarding the individual problems confronting them respecting accident prevention at crossings and steps taken by them to reduce the hazards at grade crossings. Statistics relative to the number of crossings, accidents, and protection at crossings in New Jersey was previously referred to herein. In order to inform itself of the number of accidents occurring within its boundaries, New Jersey requires the reporting of all grade-crossing accidents. Trucks transporting inflammables, explosives, and other dangerous commodities are required to stop at rail-highway crossings. Up to the present time the cost of maintaining crossing signals and other crossing protective devices has been borne 100 percent by the railroads operating within the State. Recently the Board of Public Utility Commissioners in New Jersey was authorized by legislation to permit the State to participate in 85 percent of the cost of the installation of protective devices or protection at rail-highway grade crossings in certain cases, principally passenger-carrying railroads. The remaining 15 percent of the cost is borne by the railroads.

In 1960 there were 16,755 public highway crossings in Illinois and like the Interstate Commerce Commission, the Illinois Commerce Commission requires the reporting of accidents at crossings. The number reported for that year was 537 or 13.52 accidents per 100,000 automobile licenses issued by that State, there being 3,968,966 such licenses issued in Illinois during 1960.

These accidents include automobiles, trucks, and buses, there being no separation as to private automobiles or trucks. As a result of such accidents, 85 persons were killed and 250 were injured. For the 5-year period from 1955 through 1960, there were 3,275 reported accidents, 1,071 of which involved motor vehicles being struck by a train. One thousand and three of these accidents occurred at crossings protected by flashers, 347 at crossings protected by flashers and gates, 365 at crossings protected by other types of protection, and 1,560 at crossings protected only by crossbuck signs. Illinois has an allocation of $50,000 per month to be used for the improvement of protection at grade crossings. Under its authority it orders the railroad to install crossing signals or crossing protection, but the railroad is reimbursed in part for such expenditures. Once the installation is made, maintenance therefor is borne by the railroad.

For the period from September 1, 1955, to July 15, 1961, the State of Illinois participated in the movement of 283 crossings at an estimated cost of $5,260,647. The amount available in its fund for such improvements was $2,400,000 of which $2,371,561 was allocated for these improvements, the remaining cost, namely $1,820,949 and $1,074,855, being allocated to the railroads involved, and cities, counties, or other interested public bodies, respectively. Under this program, flashing light signals were installed in 322 crossings and flashing light signals and gates were installed at 183 crossings. As stated before, 382 of these crossings were improved with funds from the Illinois grade crossing protection fund.

In order to further promote safety, Illinois has installed floodlights at grade crossings, the cost of operating and maintaining them being charged to the railroads. Certain vehicles such as schoolbuses, those carrying passengers for hire, and those transporting petroleum, explosives, and other dangerous commodities are required to stop before proceeding over a rail-highway grade crossing. Where fast trains are operated, devices are required to be installed to give advance warning of about 20 seconds of the approach of the train.

The State of Illinois is concerned with the safe transportation of petroleum over grade crossings and has instituted a program with a view to routing such vehicles over crossings that are fully protected rather than over crossings marked only with crossbuck signs. At the time of the hearing the Illinois Commerce Commission was in the process of initiating conferences with transporters

and marketers of petroleum products for the purpose of instituting some workable program for the routing of such vehicles.

In Minnesota there are approximately 10,000 rail-highway grade crossings. The Minnesota Railroad and Warehouse Commission requires the railroads to report all accidents that occur at rail-highway grade crossings even though they result in no damage to the motor vehicle, or rail property, or injury to any person. That commission has legislative authority to require the railroads to construct an overhead or maintain an underground crossing and divide the costs thereon between the railroad, the town, county, municipal corporation, or State Highway Department on such terms and conditions as that commission may deem just and equitable. Under such authority the Minnesota Railroad and Warehouse Commission designated about 1,167 of the 10,000 grade crossings as "STOP" crossings; approved plans for and inspected the installation of 857 Minnesota standard automatic electric highway railroad crossing signals and grade crossing gate signals; and issued orders and approved plans for the installation of 154 grade separations since 1945.

Since 1950, Minnesota's safety record at grade crossings has improved considerably. In 1950 there were 407 reportable all-type accidents that occurred at grade crossings in which 48 persons were killed and 190 injured. For the first 9 months of 1961 for which statistics were available, there were 140 accidents resulting in 24 deaths and 68 injuries. Only eight of these accidents involved motortrucks, seven being struck by the train, while one truck ran into the train. These eight accidents resulted in the death of nine persons and injuries to four.

California has taken a very active part in removing hazards at rail-highway grade crossings. It is making and has completed numerous surveys with the view of upgrading or eliminating grade crossings. The earliest survey on a countywise basis was made in 1916 by the California Public Utilities Commission. Periodical surveys have been continued. The California Public Utilities Commission staff reviews conditions at such crossings for the purpose of determining how these hazards can be eliminated. From these surveys priority lists are established for the upgrading of protection or the closing of unnecessary crossings.

Between 1948 and 1951 a complete survey was made of the 14,000 crossings then in California. At present there are about 12,000 crossings in California. The Public Utilities Commission in California is empowered by the legislature to prescribe

regulations and exercises surveillance over the crossings in that State. It has the power to determine the manner in which crossing protection shall be installed or improved and to allocate the cost of such protection as well as the power to close crossings if it appears that they should be closed. No new crossings may be constructed in California without the approval of that commission. Furthermore, it has the exclusive power of determining the conditions under which all crossings shall be operated and protected. In 1953 the legislature set up a fund of $500,000 to assist the cities and counties in California in paying their shares for grade-crossing protection devices. At the present time this fund has been increased to $1,650,000. Prior to the creation of this fund, the railroads and public agencies divided the costs of these installations on a 50-50 basis. As a result of this legislation the railroad now pays 50 percent of the cost of a new signal installation at grade crossings while the city or county involved pays 25 percent and the remaining 25 percent is paid by the California Public Utilities Commission through this fund. Payments from this fund are not used on State Highways or on projects that are financed through the Federal aid. In addition to the fund available for grade-crossing protection devices, California has another separate fund available for grade separations, and, like the protection devices fund, it cannot be used on State highways or on Federal aid projects.

Accident statistics submitted by the California Public Utilities Commission with reference to financial assistance granted from the grade-crossing protection fund on 367 crossings, which represent all crossings for which allocation requests had been filed as of December 31, 1961, and for which 3 years' accident experience before and after installation, is available, show a great improvement at grade crossings. For example, the total accident experience of 874 prior to installation, involved 124 deaths and injury to 413 persons. Of a total of 303 accident experiences for 3 years after installation, only 25 deaths and injury to 89 persons were involved. This resulted in a decrease of 571 or a 65-percent decrease in accident experience, 80-percent decrease in deaths, and 78-percent decrease in injuries. It is interesting to note that there were 236 crossings or 64 percent at which accidents decreased, 37 crossings or 10 percent at which accidents increased, and 24 crossings or 7 percent at which there was no change. There were no accidents at 70 crossings either before or after installation. For the year 1960 nearly 60 percent of the

grade-crossing accidents in California occurred at crossings protected either by automatic signals, crossing gates, human flagmen, uniformed officers, or trainmen.

During 1960 there were 1,148 accidents of all types at rail-highway grade crossings in California. Of this total 379 involved vehicles running into a standing or moving train, 133 of which occurred during daylight hours. Buses were involved in only four of these accidents. Trucks, and trucks and trailers, were involved in 245 of these accidents. It has been California's experience that most of the dangers created at grade crossings are due to the independent or uncertificated vehicles.

Section 22452 of the California Vehicle Code requires motor vehicles carrying passengers or employees, including passenger and school buses, and motortrucks transporting explosive or flammable liquids or other dangerous commodities, to stop before proceeding across a grade crossing. A violation of this section may result in the revocation of a driver's license, but to the knowledge of witnesses appearing in behalf of the California Public Utilities Commission, no license has ever been revoked for such a violation. The requirement under this section that certain vehicles stops at grade crossings was later amended to permit the California Public Utilities Commission to investigate certain crossings at branch lines, industrial spur tracks, or tracks infrequently used and, where feasible, install exempt signs whereby vehicles would not be required to stop at such crossings.

Oklahoma, being an important oil producing State has a large volume of petroleum products moved over its approximately 104,000 miles of highways. It has about 6,138 rail-highway grade crossings in Oklahoma, 5,095 of which are on the State and county systems, and an estimated 1,043 in the city limits of 52 urban areas. The 19 railroads in Oklahoma operate over 5,941.11 miles of trackage exclusive of spur tracks. During the last 10 years there were 1,370 train-vehicle accidents in Oklahoma resulting in the death of 313 and injury to 819 persons. During this period 43 grade separations were installed mostly on new highway construction. In Oklahoma, commercial vehicles and schoolbuses are required to stop at grade crossings and all grade-crossing accidents are required to be reported to the Oklahoma Corporation Commission. Oklahoma has made substantial progress in improving grade-crossing protection, but it feels that the problem of grade-crossing protection is one that should not be undertaken by the railroads alone because of their financial condition and if any

further substantial progress is to be made in reducing the hazards at grade crossings, the cost of any improvements in this respect should be borne by the public.

A recent survey by the Colorado Public Utilities Commission discloses that there are approximately 4,000 rail-highway grade crossings in Colorado, 400 of which are protected by a watchman, audible signals, visible signals, or similar protection. Jurisdiction over these crossings has been vested in the Colorado Public Utilities Commission by law which gives it power and authority to order the installation and require the maintenance of adequate crossing protection at any crossing and the added power to allocate the cost equitably between the railroads and the public.

In 1933 approximately 37 percent of the crossing accidents in Colorado occurred at crossings which were protected by some form of automatic signal protection. In approximately 34 percent of the accidents during that year the vehicle struck the train. This would indicate that there is an obligation and duty upon the motorist to use care to protect himself and his family and not expect the railroads to take care of them at the crossing, although the railroads should bear a reasonable part of this duty and obligation. For the year ended December 31, 1960, there were 33 rail-highway accidents at grade crossings in Colorado. Based upon an average cost of $10,000 of equipping a crossing with adequate automatic protective devices, it would require an expenditure of $40 million to protect the 4,000 crossings at grade in Colorado. This expenditure is exclusive of maintenance costs.

A former chairman of the Washington Public Service Commission, appearing in behalf of the railroads, pointed out that the grade-crossing problem is a social one, the same as any other public hazard. This problem, it was alleged, is the same as problems of policy, of building highways, and of moral obligations of society, and that if transportation facilities are to be supplied, they must be supplied in a safe manner, and grade-crossing protection being a public responsibility, should be financed with public funds.

In 1957 there were about 10,000 rail-highway grade crossings in Washington, only about 5,000 of them being under the jurisdiction of the Washington Public Service Commission. Later, the jurisdiction of that commission was extended by giving it authority to consider the need for improving grade crossings or to order grade-crossing separations and to allocate public funds for this purpose. Prior to 1957 that commission had no such jurisdiction or authority.

A freight traffic consultant doing business in Seattle, Wash., also appearing in behalf of the railroads, was greatly concerned about the expense of improving grade crossings, fearing that if the railroads were burdened with this expense, the result would be an increase in freight costs which would be passed on to the shippers. In the opinion of this witness, the economy in the State of Washington is such that shippers would be hard pressed to maintain their business prosperity if the cost of rail service were increased. For this reason, he was of the opinion that the added expense for improvements at grade crossings should not be borne by the railroads. This witness estimated that there are about 3,600 crossings in Washington which are protected only with crossbuck signs. To protect these crossings with automatic protective devices would cost about $36 million, exclusive of maintenance costs. The total rail mileage in Washington is 4,979 miles so that there is about one crossing for each mile of track.

The Montana Railroad Commission has jurisdiction over railroad regulation including matters dealing with grade crossings and installations at such crossings. Montana has experienced similar increase in highway traffic both in volume and congestion that other States have experienced. The number of vehicles operated daily, increased from slightly over 300 in 1940 to 800 in 1960. By contrast the total class I railroad freight train mileage for the western district of the United States was for 1960, more than 92 million miles less than it was annually for the 1941-45 period. Passenger train-miles for the same period show a reduction of more than 50 percent.

Montana has 2,523 crossings of all kinds. Of these, 2,321 are not presently specially protected. To separate the grades on all of these crossings using the national figure of $367,000 per separation would cost $925,941,000. To install automatic protective devices on these crossings would cost $23,210,000 exclusive of maintenance cost which would approximate $2,270,700 per year.

The chairman of the Montana Railroad Commission submitted evidence regarding the grade-crossing problem in Montana and referred to the prohibitive cost of installing protective devices or separating grades. This gigantic burden on the railroads, even if bearable, in the opinion of this witness would have to be passed along to the users of railroad services in increased rates and charges which would not be in the public interest. For this reason, a reasonable program for grade-crossing improvement must be borne by public funds. The controlling element in accident

exposure at these crossings is the increasing highway traffic. In furtherance of his position this witness testified that there was ample precedent for assumption by the public of the grade-crossing responsiblity. For example, the Federal Government with State matching funds, is already paying a good share of crossing elimination on Federal-aid highways. This appears to be a satisfactory solution as well as the only solution which appears to offer any practicality for meeting the increasing problem on all crossings.

Despite Montana's efforts to work out a solution to accidents at grade crossings, there were 34 collisions at such crossings in 1961 resulting in 19 persons killed and 32 injured, which is the largest number of fatalities and injuries at crossing accidents in Montana in 5 years. The human element involved in grade-crossing accidents demands top attention. In the final analysis, regardless of the protective devices used, it is the action of a person that results in, or prevents a crossing accident. No amount of previous protection can change this fact or lessen the individual responsibility for utmost care in using crossings. It is here that public understanding and law enforcement can be most useful in preventing accidents, and no person has more at stake than those directly involved.

Section 195.28 of the Wisconsin statutes provides that upon petition of the city council, village board, member of town board, superintendent of highways, or by five or more freeholders in any town, village, or city, or of any railroad corporation to determine whether a public highway and railroad grade crossing is dangerous to human life, the Wisconsin Public Service Commission shall investigate, and if action is indicated, shall conduct a public hearing. After hearing, that commission shall then determine whether the warning devices at such crossing are adequate and if the crossing complained of is dangerous to human life, that commission may order the installation of gates, electric signals, or other suitable safety devices at such crossing. Once it is determined that crossing protection is needed and the type of signals to be installed is agreed upon, the total cost is set forth. Under Wisconsin statutes, since 1949, the State can pay up to, but not more than, 50 percent of the cost of such protection, the remainder being paid by the railroad, city, or county. A fund of $250,000 is provided annually under this statute as the State's share in this distribution of cost.

There are approximately 8,200 rail-highway grade crossings in Wisconsin, about 1,800 of which are protected. During 1961 there

were 83 rail-highway grade-crossing accidents in Wisconsin resulting in 36 fatalities and 85 injuries. More accidents occurred at protected crossings than at unprotected crossings. Motortrucks were involved in 19 of these accidents in which 8 persons were killed and 17 injured. None of these 83 accidents involved motorbuses. This compares with a total of 81 accidents in 1960 resulting in 51 fatalities and 84 injuries. Fifteen of these accidents involved motortrucks in which 9 persons were killed and 24 injured. Motorbuses were not involved in any of these accidents and for the most part motor vehicles owned and operated by private or local carriers were involved. Certificated carriers were in the minority. Most of the crossing accidents in Wisconsin involve some violation of the Wisconsin Motor Vehicle Code which requires all vehicles to stop when signaled to do so. Relatively few drivers are prosecuted for violation of this code and when there is prosecution, it is usually the result of an accident. It is apparent therefore that a statutory penalty, if not enforced, does not serve as a deterrent and if people realize there is no danger to themselves personally from a certain statutory requirement, they are less prone to comply with it.

The motor vehicle commissioner for the State of Wisconsin expressed an opinion that the motorist does not seem to recognize the need for observance of grade crossing markings. This is an important factor to consider if success is to be achieved in reducing railroad crossing accidents. All channels of communications must be utilized to create a public awareness of the grade-crossing danger and to encourage the motorist to remain constantly on the alert for sign warnings of such danger. While much can be done by local or national agencies to promote the motorist's safety, the motorist himself must assume the duty he very often neglects, the duty to make his driving actions safe at all times for the protection of himself and his family. This responsibility is more pronounced as an obligation of the motorist because of the increasing number of vehicle registrations as compared to the steadily decreasing rail traffic. In an endeavor to inform the public and educate it to the need for the exercise of caution at grade crossings, safety messages are made by radio and television and also circulated by means of newspapers and publications in Wisconsin.

Missouri, like all other States, has a grade-crossing problem and has taken steps to improve conditions and reduce the number of accidents. There are 16 class I railroads operating a total

mileage of 7,119.94 in 1961 including main and branch lines within Missouri. This is a decrease of 28.55 miles since 1955 or a decrease of 0.4 percent. On the other hand, there were 1,572,378 vehicles of all types registered in Missouri in 1955 compared to 1,892,779 vehicles in 1961, an increase of 20 percent. In 1955 there were 7,453 crossings in Missouri which were reduced to 7,308 in 1961 due to grade separations or abandonment of the rail lines. The number of crossings protected by gates, watchmen, or signals, either audible or visible, have increased from 1,024 in 1955 to 1,116 in 1961. However, there are still 6,192 crossings not specially protected as compared to 6,429 in 1955. In recent years there has been a slight reduction in the number of accidents occurring at crossings. For example, in 1961 there was a total of 74 accidents at rural and urban areas compared to 85 in 1955. On the other hand, there were 45 persons killed in 1961 compared to 30 in 1960 and 39 in 1955 according to the statistics submitted by the railroad safety supervisor of the Missouri Public Service Commission. Our Bureau of Transport Economics and Statistics in its pamphlet entitled "Rail-Highway Grade Crossing Accidents" for the year ended December 31, 1960, shows that there were 26 persons killed at grade crossings in Missouri in 1960. This statistical difference is due apparently to the difference in the reporting requirements regarding the definition of a fatality. In 1955 there were 83 persons injured at grade-crossing accidents in Missouri compared to 73 injured in 1960 and 81 in 1961. Again there is a slight difference between our statistics for 1960 and those submitted by the Missouri Public Service Commission, apparently because of the reason indicated above.

The Missouri Public Service Commission being concerned with the number of accidents and fatalities occurring at rail-highway grade crossings in Missouri, inaugurated a program for the purpose of improving conditions at such crossings. An inspection team was formed composed of a highway engineer, a safety officer of the Missouri Highway Patrol, and the railroad safety supervisor of the Missouri Public Service Commission which conducted extensive on-the-ground surveys at 87 most dangerous crossings in Missouri. In trying to establish a pattern in these grade-crossing accidents it is found from these surveys that the only noticeable similarity was driver negligence.

As a result of these inspections and surveys the Missouri Public Service Commission was instrumental in having reflector-

ized crossbuck signs installed at crossings. A vigorous campaign was initiated to remove physical obstructions at crossings. Because of a number of accidents occurring at Rolla, Mo., that city passed an ordinance requiring all railroad crossings to be protected with an octagon-type boulevard stop sign even at crossings where automatic flashing lights are also in operation. These signs have been very effective. Nearly all drivers are obeying them, and the ordinance is being enforced by fining violators. These actions have resulted in improvement at Rolla. No accidents have occurred since passage of such ordinance.

The chairman of the Judiciary Committee of the Nebraska Legislature presented evidence concerning the rail-highway grade-crossing problem in Nebraska. There are about 6,400 crossings in that State, only 560 of which are specially protected. The railroad mileage approximates 6,000 miles. There are approximately 10,000 miles of State highway. During the 3-year period from 1957 to 1959 inclusive, a report submitted by the Nebraska State Department of Roads Traffic Engineering Section disclosed a total of 302 accidents, 61 of them or 20 percent of which were fatal and 213 or 70 percent of which resulted in injuries. In 101 of these accidents the motor vehicle struck the train. Approximately 55 percent of all crossing accidents occurred during daylight hours. In 63 percent of these accidents the driver involved lived within 10 miles of the site of the accident indicating that he was familiar with the location and was aware that there was a crossing there. In volume, the motor vehicle train accidents amounted to only 0.5 percent of all accidents in Nebraska, but this one type of accident alone accounted for approximately 7 percent of the fatalities incurred in Nebraska traffic accidents.

During the 1959-60 period for which latest figures were available, there were 88 rail-highway grade-crossing accidents in Nebraska in which 44 persons were killed and 69 injured. Eighteen of these accidents involved a motor vehicle being struck by a train during daylight hours while 8 occurred after dark. In 9 accidents a motor vehicle ran into the side of a train during daylight hours while 12 similar accidents occurred after dark.

Realizing the need for participation by Nebraska in a program for improvement at grade crossings the legislature enacted into law in 1961, a statute providing a special grade-crossing protection fund, money from such fund being obtained in the amount of $6,000 per month from the Nebraska gas tax. This fund is used for participation by Nebraska in 60 percent of the costs of erecting

automatic railroad protection. Prior to this enactment, the entire cost of erecting grade-crossing protection devices was borne by the railroad involved, except in instances where Federal aid assistance was available.

A rate expert employed by the State Board of Equalization and the Public Service Commission of Wyoming was instructed by that commission to appear in its behalf and present the problems confronting it with respect to rail-highway grade crossings. There are 705 grade crossings in Wyoming, more than 500 of which are not specially protected, being protected only with standard fixed signs. The four class I railroads in Wyoming operated 10,151,326 train-miles in 1958. In 1961 the total train-miles operated was 9,259,206, or a reduction of almost 9 percent. In 1960 there were five grade-crossing accidents in Wyoming resulting in the death of one person. In 1961 the number of such accidents increased to 26 in which 6 persons were killed and 9 injured.

In the past, Wyoming has not taken a very active part in prevention of grade-crossing accidents and because of its comparatively light population and low commercial activities, its grade-crossing problem was not considered to be as serious as in other States. Its population in 1950 was 290,529. By 1960 it had increased to 330,066. The total passenger automobile registration in 1958 was 124,902, which by 1961 had increased to a little over 13 percent to 141,567. Registration of motortrucks in 1958 was 55,286 which increased almost 15 percent to 63,555 in 1961. Thirty-seven percent of the highway traffic in Wyoming consists of out-of-State passenger cars. About 16 percent consists of commercial vehicles. Under the Wyoming statutes the Public Service Commission of Wyoming has the power to direct the manner by which all utilities shall cross public highways and other utilities, and by which public highways shall cross the utilities and to prescribe methods of approach and crossing that shall secure safety to the public. As to costs of these installations the statute provides that "At every such crossing, in case the persons interested do not themselves agree, it shall be the duty of the Commission to apportion between the parties, in accordance with justice, the costs and expenses of installing and maintaining such crossings." Under authority of this statute some informal investigations were held, but the parties agreed between themselves as to the cost.

Inasmuch as the population in Wyoming is increasing, its motor vehicle registrations are also increasing and because of its

gradual expansion commercially, Wyoming will undoubtedly participate more actively in a program for improvement of grade-crossing protection.

In Arkansas there were 528,801 motor vehicles operated in 1955 of which 372,615 were automobiles and 156,186 were trucks and other vehicles. By 1961 these had increased to 505,604 and 205,778 respectively, with a total of 711,382 or an increase of over 34 percent in this 6-year period. During this same period, 215.78 miles of railroad were abandoned. In 1961 there were 27 railroads operating in Arkansas with 3,928.7 miles of trackage not including spur tracks and there were 3,522 highway grade crossings.

During the 3-year period 1959-61 there were 115 reported train-automobile accidents in Arkansas resulting in 42 fatalities and 73 personal injury or property damages. Other accidents not reported to the State agency are not included in these figures. The most hazardous grade crossings in Arkansas are protected either by grade separations of flashing signals, but the chairman of the Arkansas Commerce Commission expressed a need for more grade separations and warning devices because of the large increase in vehicular traffic and because these devices are necessary to protect the traveling public which apparently does not use reasonable care in driving their vehicles across rail-highway grade crossings. In this witness' opinion the real benefits of more grade separations and automatic warning devices accrue to the traveling public and for that reason the expense for these installations should be borne by the public. The general counsel for the Arkansas Highway Commission also was of the view that since most of the benefits derived from any improved highway safety program, especially at rail-highway grade crossings, will accrue to the motoring public, some means should be found to finance at public expense, the installation and maintenance of the necessary structures and protective devices at rail-highway grade crossings.

In South Dakota the Public Utilities Commission was unable to give any statistics regarding the number of grade crossings, vehicle registrations, or rail-highway grade-crossing accidents, but one of its commissioners praised the railroads for their active participation in the elimination of crossing accidents. In his opinion, the grade-crossing problem has become more serious because of the extension of highway building programs and increase in the number of automobiles and trucks on the highways. More

education of the drivers of highway vehicles and strict enforcement of existing laws would greatly alleviate the situation. South Dakota has no problem with the regulated motor carriers. Its chief concern is with the unregulated or exempt motor carriers and schoolbus drivers.

The Public Utilities Commission of South Dakota has for a number of years considered in detail the proposal to reflectorize all operating units of trains, but in its opinion it is not yet convinced that that is the answer to the problem of reducing rail-highway grade-crossing accidents. Its reason for taking this position is the fact that many of the crossing accidents occur in daylight hours when reflectors would not make the train more visible and because many, if not most of them, result from lack of care on the part of the driver, or in some cases an express effort of the driver to beat the train. Also, many times motor vehicles are operated so carelessly that protective devices at crossings have been ignored. In the opinion of this representative of the Public Utilities Commission of South Dakota no device can replace care on the part of the driver of a motor vehicle. Reflective devices cannot overcome the forces of nature and the effects of industrial operations; namely, snow, fog, grime, dirt, grit, heat, and other unfavorable conditions. Furthermore, reflectors might invite carelessness on the part of some drivers while perhaps alerting a few others.

Statistics of the Vermont Department of Public Safety show that for the 10-year period from 1950-59 there were 130 train-motor vehicle accidents investigated by the Vermont State Police. Twenty percent of these accidents were fatal. Injury accidents represented 38.5 percent and property damage accidents represented 41.5 percent. Three main causes of these accidents were inattention, exceeding the speed limit by motor vehicle, and slippery road conditions. These three causes represent 74 percent of all train-motor vehicle accidents occurring in Vermont during this 10-year period. Sixty-four and one-tenth percent of the operators in these accidents resided within 15 miles of the accident scene.

Of a total of 8,800 grade crossings in Iowa, 1,300 are protected with automatic protective devices. In 1961 there were 81 grade-crossing accidents in Iowa, 17 of which occurred at crossings protected with automatic warning devices. In 10 of these instances the driver of the motor vehicle disregarded flashing red signals, three ignored automatic gates, three failed to observe wig-wag signals, and one passed a member of a train crew presenting a

stop warning. These are examples of a lack of observance by drivers that resulted in these needless accidents.

Prior to 1959 there were very few automatic safety devices installed at grade crossings on non-Federal aid highways in Iowa. Since there are some 110,000 miles of roads and streets in Iowa only a small portion of which are eligible for Federal aid assistance and neither the local governmental units nor the railroads could provide adequate funds for crossing protection, the Iowa Legislature decided to examine the possibility of obtaining State assistance in financing grade-crossing protection in the county and municipal areas. Accordingly, in 1961 the General Assembly in Iowa appropriated $120,000 for 1962 and a similar amount for 1963 to be used in aiding the local governmental units and the railroads involved in establishing highway grade-crossing safety and protection facilities and devices. Thus the grade-crossing fund in Iowa provides financing for completely new installations in areas previously not subject to governmental aid. The appropriation of funds for these projects is made under allocations from revenues derived from automotive license fees and motor vehicle fuel taxes collected by the State of Iowa. The Iowa authorities are confident that this highway grade-crossing fund approach will help to prevent tragic accidents through an increase in the railroad crossing warning systems but this alone will not solve the grade-crossing problem. Observance of warning signs and signals is the key element, but if the public ignores these warnings there is no effective protection at the crossing.

The evidence submitted by New Mexico which was limited to its program regarding its schoolbus operations is discussed later in the report under the caption "Operation of Schoolbuses."

A State legislative representative for the Brotherhood of Railroad Trainmen in Arizona who is also chairman of the State Legislative Board of the Railway Brotherhoods, speaking for the organizations represented by him, stated that possible solution to the grade-crossing problem would be "(1) the construction of as many grade separations and upgrading of crossing protective installations as practicable, (2) a stepped up program of enforcement of the laws requiring stopping and exercising of caution at grade crossings, and (3) rerouting, when possible, of trucks transporting dangerous cargoes, including TNT, radioactive materials, poisonous fluids, and gasoline. This witness, as did several others in this proceeding, expressed the view that the installation and cost of grade protective devices and grade separations should

be borne by the public and if this was done, such installations would be expedited. This position is taken on the ground that there is no difference between the public paying for the cost of traffic lights and paying for the cost of installing and maintaining signal devices at rail-highway grade crossings.

Summarizing the experience of the several States dealing with the grade-crossing problem there appears to be no set pattern followed. Numerous different ideas and plans have been adopted or suggested. While there is no uniformity in these plans some of the States agree that the costs for the installation of separations or other protection at grade crossings either should be borne by the public or a plan adopted whereby such costs can be allocated between the railroads and the public, prorated on the basis of the benefits derived from the installations. This position is taken for the reason that the construction and maintenance of rail-highway grade-crossing separation structures and automatic protective devices is a public responsibility. In view of this, several of the States have created the so-called grade-crossing funds heretofore discussed. Thus, some States have passed legislation to relieve, in part, the railroads' burden of the cost of grade separations and where formerly these costs were divided equally between the railroad and the State, more recent trends have been to limit the railroads' share of the costs not to exceed 15 percent.

It is significant to note the experience of the different States regarding the degree of safety afforded by protective devices at grade crossings. In California approximately 60 percent of all grade-crossing accidents in 1960 took place at specially protected crossings. For the same year 67 accidents occurred at grade crossings in New Jersey, which were protected with automatic or manual gates, flashing lights, automatic signals, or other audible or visible signals and flagging, while 72 accidents occurred at grade crossings not so protected. In Minnesota approximately 50 percent of such accidents occurred at especially protected crossings. In Wisconsin there are about 20 percent more accidents at unprotected than at protected crossings, but on a crossing-for-crossing basis there are more accidents at protected crossings. This is due, at least in part, to the greater volume of traffic both with regard to trains as well as motor vehicles that move over protected crossings. Consequently, exposure to both is greater at the crossings where volume is heavy. Notwithstanding the heavier volume of traffic, it would be natural to assume that the special protection afforded at such

crossings should largely offset the increased vehicular traffic. However, the record does not entirely support this assumption since 36.4 percent of all grade-crossing accidents reported to this Commission for 1960 occurred at crossings where some form of special protection was provided. This would indicate that while a protective device may act as a deterrent to some drivers of motor vehicles approaching a rail-highway grade crossing, a large number of these accidents occurring at specially protected crossings apparently result because of the failure of the operator of the motor vehicle to heed the protection afforded him. In this connection it is of interest to note that such protective devices as crossing gates, for example, which should afford adequate protection to drivers of motor vehicles are not always effective and present a maintenance problem to the railroads. For example, during the years 1959 and 1960, the latest period for which figures were available, the Southern Pacific Company spent a total of $85,497 to repair crossing gates, all of which were lighted, reflectorized, or both, which were damaged by motor vehicle operators. An automatic crossing gate near Tracy, Calif., placed in service on March 21, 1955, was damaged by motor vehicles 172 times from that date to January 1, 1962. The cost to the Southern Pacific Company of repairing this one device during this period was $21,151 or an average of $8.54 a day.

ACCIDENT RECORD OF MOTORBUSES

The accident record of motorbuses as compared to motortrucks and other motor vehicles is shown in table 8 of statement No. 6207 of the Bureau of Transport Economics and Statistics as follows:

TABLE 8.—*Rail-highway accidents involving motor vehicles,*[1] *by type of motor vehicle, year ended December 31, 1961-58*

Type of motor vehicle	Total number of accidents				Year 1961			
					Number of motor vehicles registered (thousands)	Number of accidents per million vehicles registered	Number occurring in 1961	
	1961	1960	1959	1958			Daylight	Dark
Passenger automobile	2,271	2,332	2,224	2,220	63,274	35.9	1,200	1,071
Motorbus	10	13	5	8	281	35.6	7	3
Motortruck	633	621	586	603	12,291	51.5	487	146
Motorcycle	17	14	27	24	596	28.5	14	3
Total	2,931	2,980	2,842	2,855	76,442	38.3	1,708	1,223

[1] Privately and publicly owned.

It is noted from the above table that motorbuses, privately and publicly owned, have a better safety record than motortrucks; the former had 35.6 accidents per million vehicles registered during 1961 while the latter record is 51.5 accidents per million vehicles registered. The record for class I carriers is even better. There were no bus passengers killed as a result of a grade-crossing accident in a bus operated by a class I carrier during the 4-year period from 1958 to 1961. In 10 grade-crossing accidents during this period involving class I bus operators, 52 bus passengers were injured. On this basis there has been one grade-crossing accident for each 342 million vehicle-miles or one injury for each 1,200 million passenger-miles traveled. It is estimated that the comparable figure for automobiles involved in accidents is one accident in 253 million miles and one injury for each 300 million passenger-miles traveled. This favorable record is attributable to the safety programs instituted by the bus operators. Statistics submitted by the Greyhound Corporation show that there were no passenger fatalities for the 18-year period from 1944 to 1961 inclusive, during which time it had operated a total of 8,576,696,898 bus-miles. Between 1952 and 1961 during which it operated 5,038,072,150 miles it was involved in only 14 grade-crossing accidents resulting in 14 personal injuries.

Greyhound attributes its good safety record to three basic factors; namely, the selection and training of drivers, the high regard of top management for principles of safety in operation, and the implementation of its safety ideas through its safety program and incentive awards. Before a driver is accepted by Greyhound he must comply with certain age, health, mental, and physical qualifications. His reputation and financial standing in the community is investigated and if satisfactory, he is accepted for driving and study classes of from 4 to 6 weeks' duration. During this training period the driver must familiarize himself with the safety regulations of the various regulatory agencies and he is also instructed regarding courtesy, public relations, and mechanical aspects of driver training.

Upon completion of his training the driver is given a final examination and if found qualified, he commences his work as a probationary driver. Supervision of the driver continues even after completion of his training. Safety and operating supervisors who are constantly on the highway, check on drivers for compliance with all safety regulations including Greyhound's requirement that buses stop before entering any rail-highway

grade crossing. In compliance with this requirement the bus must stop not less than 15 feet nor more than 50 feet from the rail nearest the front of the bus, the driver must fully open the door and after stopping, listen and look in both directions along the track for approaching engines, trains, or cars. In addition the driver must not completely close the bus door while crossing the track which must be crossed in low gear until such time as he reaches the other side of the track. Infractions of any safety regulations may result in disciplinary action or even dismissal. As an added inducement, meritorious drivers are given incentive awards. Greyhound employs about 10,000 drivers who operate about 5,000 buses over 100,000 miles of operation in the United States.

OPERATION OF SCHOOLBUSES

Excluding Alaska and Hawaii, about 12.5 million schoolchildren are carried daily by some 175,000 schoolbuses and several thousand passenger automobiles used as buses. In 1960, 50 students were killed and 2,067 were injured in 8,908 reportable bus accidents in 42 States which submitted reports to the National Safety Council. These statistics are not limited to grade-crossing accidents but include all types of schoolbus accidents. The seriousness of grade-crossing accidents involving schoolbuses warrants grave consideration as evidenced by an accident investigated by this Commission which occurred on December 14, 1961, near LaSalle, Colo., involving a collision between a passenger train and a schoolbus transporting 36 schoolchildren in which 20 of them were killed and 16 and the driver of the bus were injured.

In numerous instances traincrews reported that operators of schoolbuses had failed to stop at grade crossings. A check consisting of observations of rail-highway grade crossings at Baton Rouge, La., by the Illinois Central Railroad for a period of 1 1/2 hours disclosed a failure of approximately 26 schoolbuses transporting a school band to a convention to stop at crossings. Other instances were cited where near-misses occurred due to operators of schoolbuses failing to exercise caution and care before driving their vehicles over rail-highway crossings.

Notwithstanding the importance of entrusting the safety of schoolchildren only to the most competent and responsible bus drivers, factors other than competency or qualifications are considered sometimes in the selection of such drivers. This is exemplified

by a statement by the assistant general manager of the National Safety Council, that employment of a schoolbus driver frequently took place upon the following basis:

> * * * so in hiring school bus drivers they are willing to accept someone who I am sure, you people in your community will say the person is not qualified to haul 40 youngsters, but in this community they will say "Poor old Joe, doesn't have a job. He can't see very well and he needs the money, so let's give him the job driving the school bus.

Fortunately all schoolbus drivers are not selected on the above basis. An example where a conscientious selection of schoolbus drivers is exercised in an attempt to select qualified, intelligent, high grade men as operators of schoolbuses, is the program instituted by New Mexico. This State has for many years taken a very active part in the welfare of its schoolchildren and accordingly limited its evidence in this proceeding to the action taken by it in the promotion of their safe transportation. In 1937 it instituted a novel plan apparently not adopted by any other State, whereby the entire cost and control of schoolbus transportation is assumed by the State from State-allotted funds. A Department of Transportation established on July 1, 1937, has complete control over approval or disapproval of allotment of funds, approval of contracts for transportation, and approval of drivers who drive schoolbuses. A training school was instituted in 1941 and each of the 1,400 schoolbus drivers in New Mexico are required to attend 1 week's training in order to keep their driver's contract in force. In training these drivers emphasis is placed on the care and caution that must be exercised in the movement of schoolbuses over rail-highway grade crossings. They are cautioned to adhere strictly to the law requiring them to stop at such crossings, open the door, look and listen not closer than 15 feet and not further than 50 feet from the nearest rail and, if satisfied, they can safely cross the track, they must close the door, shift into low, and not change gears until they reach the other side of the crossing. Infractions of any of the regulations are severely dealt with and may result in dismissal and revocation of the driver's special school license. As an inducement to reliable drivers, New Mexico has in effect a pension system and an award plan for outstanding drivers. Driver training courses are offered to high school students and have proven to be a very effective method of accident prevention.

In addition to the compulsory training for schoolbus drivers and the training for high school students, courses are also con-

ducted for fleet operators and supervisors of workshops and also a course covering joint problems of busdrivers and superintendents. The subjects covered include preventive maintenance, child behavior, uniformity of standards for schoolbus operations, and public relations.

The annual schoolbus mileage in New Mexico is slightly under 11 million miles. These buses cross 183 rail-highway grade crossings twice daily. Sixty-two of these crossings are protected with signals while 121 are not so protected. These crossings are the ones used by schoolbus drivers and do not include many others estimated at between 400 and 500 not here considered. With the exception of some minor accidents which are thoroughly investigated because they are potential fatal ones, New Mexico has had an excellent safety record in the operation of its schoolbuses. It attributes this record to its program of careful supervision, selection, and training of its busdrivers.

THE INTERSTATE COMMERCE COMMISSION'S PART IN RAIL-MOTOR SAFETY

The Interstate Commerce Commission administers a number of safety laws including the Safety Appliance Acts (45 U.S.C. 1-15) which requires that cars and locomotives be provided with automatic couplers, handholds, running boards, power brakes, and other safety appliances; the Locomotive Inspection Act (49 USC 22-34) which requires that only equipment in proper condition be operated and that rail carriers inspect such equipment regularly; the Accident Reports Act (45 USC 38-43) which requires all railroads to make reports of accidents and provides that this Commission may investigate accidents; the Signal Inspection Act (49 USC § 26) which authorizes this Commission to control discontinuance or modification of signal systems and authorizes this Commission, if found necessary in the public interest, to order any rail carrier to install specified signal systems; the Transportation of Explosives Act (18 USC 831-835) authorizing this Commission to promulgate regulations for the safe transportation on the part of both shippers and carriers of explosives and dangerous commodities; the Hours of Service Act (45 USC 61-64) which limits hours of work by traincrews and others having to do with train movements; The Power or Train Brakes Safety Appliance Act of 1958 (45 USC 9) which authorizes this Commission to prescribe Rules, Standards and Instructions for

the Installation, Inspection, Maintenance, and Repair of Power or Train Brakes; and part II of the Interstate Commerce Act which among other things authorizes this Commission to prescribe safety regulations for motor carriers subject to its jurisdiction; and section 1, paragraph (21) of the Interstate Commerce Act (49 USC 1 (21)) which provides in part:

> The Commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to this part, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this part * * *.

The railroad safety acts are administered almost entirely by the Bureau of Safety and Service while the Section of Locomotive Inspection handles inspection of all locomotives, investigates locomotive failures, and has authority to order defective locomotives out of service. The Section of Railroad Safety which, like the Section of Locomotive Inspection, and Section of Car Service, is a part of the Bureau of Safety and Service and administers all safety acts except the Locomotive Inspection Act, and Accident Reports Act insofar as the latter relates to the collection of accident statistics. The Commission is empowered to investigate all types of rail and motor carrier accidents.

Insofar as here pertinent, section 25 of the Interstate Commerce Act, commonly referred to as the Signal Inspection Act is the only authority delegated to this Commission which has any bearing or relationship to the issues raised in this proceeding. This section provides in part:

> That the Commission may, after investigation, if found necessary in the public interest, order any carrier within a time specified in the order, to install the block-signal system, interlocking, automatic train stop, train control, and/or cab-signal devices, and/or other similar appliances, methods, and systems intended to promote the safety of railroad operation, which comply with sepcifications and requirements prescribed by the Commission, upon the whole or any part of its railroad such order to be issued and published a reasonable time (as determined by the Commission) in advance of the date for its fulfillment * * *.

Section 25 of the Interstate Commerce Act, contains no provisions for the protection of vehicular traffic at grade crossings and applies only to signals and other similar appliances, methods, and systems used for the safe movement and control of trains thereby protecting them from collisions. These signals are also

installed as a means of increasing the capacity of rail lines by permitting the operation of more trains at increased speeds. These signal systems increase the freedom and flexibility of train movements. Some types of signals such as an automatic block-signal system, for example, give warning to the traincrew of a broken rail if the break is so located and sufficient to break the electric track circuit. Automatic train control devices, for example, are automatic appliances for the control of trains in the event of failure of an employee for any cause to obey signal indications. The purpose of these signal systems is discussed in *Automatic Train Control Devices*, 69 I.C.C. 258, and *Appliances and Systems to Promote Safety of Operation*, 268 I.C.C. 547.

Rules, standards, and instructions for installation, inspection, maintenance and repair of automatic block-signal systems, interlocking, traffic control systems, automatic train stop, train control, and cab-signal systems and other similar appliances, methods, and systems, (278 I.C.C. 267) (49 C.F.R. 136) issued by this Commission under authority of section 25 of the Interstate Commerce Act again emphasizes the fact that this section is only intended to apply to train movements as such and does not include rules applicable to movements of motor vehicles over railroad tracks.

In this proceeding an issue has been raised at the hearing and on exceptions regarding our jurisdiction over railroads with respect to rail-highway grade-crossing matters, it being the contention of some of the respondents that the Interstate Commerce Act generally and particularly section 1, paragraph (21) and section 25 of the Interstate Commerce Act together with the national transportation policy stated in the preamble of the act give us broad power "to establish any and all regulations reasonably designed to promote safety of train operations in all of its ramifications." As discussed in the preceding paragraphs, section 25 limits our jurisdiction to the installation of signalling systems and prescription of rules, standards, and instructions for the installation, inspection, maintenance, and repair of signalling systems and similar appliances, methods, and systems for the movement of trains. This leaves for consideration the authority vested in us under section 1, paragraph (21) of the Interstate Commerce Act.

Insofar as here pertinent this paragraph requires a common carrier by railroad to provide itself with safe and adequate facilities for performing its "car service" as that term is used in the

act and gives us jurisdiction over abandonment and extension of carriers' lines to provide for rail service. As defined in section 1, paragraph (10) of the act, "car service" includes the "use, control, supply, movement, distribution, exchange, interchange, and return of locomotives, cars, and other vehicles, used in the transportation of property, including special types of equipment, and the supply of trains, by any carrier by railroad subject to this part." This paragraph was enacted to enable this Commission to facilitate and expedite the movement of property, and it is significant to note that we have construed the provisions of this paragraph as not vesting in us even the authority to regulate the operation of passenger trains. See *Wisconsin R. Comm.* v. *Chicago & N. W. Ry. Co.*, 87 I.C.C. 195. "Car service" in this respect connotes the use to which vehicles of transportation are put, not the transportation service rendered by means of them. Cars and locomotives, like tracks and terminals, are the instrumentalities. We have consistently held in numerous instances that the term "car service" as used in the act relates to vehicles used in the transportation of property. See *Size and Minimum Weight of Cars*, 182 I.C.C. 125, 135-136; *Chicago, R. I. & P. Ry. Co.* v. *Baltimore & O. R. Co.*, 113 I.C.C. 681, 683; and *Train Service On Northern Pac. Ry.*, 112 I.C.C. 191, 194-195. Section 25 and section 1, paragraph (21) limit our jurisdiction to matters relating to the movement and operation of trains, and neither of these sections nor other existing statutes vest in us any jurisdiction over railroads with respect to rail-highway grade-crossing matters. Accordingly, this Commission is without authority to require the installation of protective signals, gates, or other devices at rail-highway grade crossings and should it desire such authority, it must obtain it through appropriate legislation from the Congress.

While this Commission does not have any authority to require installation of or to prescribe regulations for the above protective devices at grade crossings, it does have authority under the Interstate Commerce Act (49 USC 304) to prescribe regulations for the safe operation of motor vehicles under its jurisdiction. By virtue of such authority the Commission issued Motor Carrier Safety Regulations (49 C.F.R. 190-197), section 192.10 of which provides that:

(a) Every motor vehicle transporting any of the following:
(1) Passengers;
(2) Explosives - Class A or Class B;
(3) Chlorine; or,

(b) Any motor vehicle which in accordance with the Commission's regulations is placarded with one of the following markings:
(1) Dangerous
(2) Dangerous - Radioactive material;
(3) Compressed gas;
(4) Poison gas; or
(c) Any cargo tank, whether loaded or empty, used for the transportation of any dangerous article as defined in the regulations of the Commission shall, upon approaching any railroad grade crossing, make a full stop not more than 50 feet nor less than 15 feet from the nearest rail of such railroad grade crossing, and shall not proceed until due caution has been taken to ascertain that the course is clear; except that a full stop need not be made at:
(1) A street car crossing within a business or residence district of a municipality;
(2) A railroad grade crossing where a police officer or a traffic-control signal (not a railroad flashing signal) directs traffic to proceed;
(3) An abandoned or exempted grade crossing which is clearly marked as such by or with the consent of the proper state authority, when such marking can be read from the driver's position.

Notwithstanding the above requirements which are similar to regulations adopted by many of the States, there is a tendency on the part of motor vehicle operators to ignore these requirements. In most of the accidents reported to this Commission the driver of the motor vehicle failed to stop before moving over a rail-highway grade crossing. It is not a question of being unfamiliar with the crossing since most of the persons involved in these accidents live within not more than 25 miles of the site of the accident. It is apparent that an intensified enforcement of these regulations would materially aid in a solution to the grade-crossing problem.

Another provision of the Commission's Motor Carrier Safety Regulations which is pertinent to the issues here presented is section 192.11 which reads as follows:

Every motor vehicle other than those listed in Section 192.10 shall, upon approaching a railroad grade crossing, be driven at a rate of speed which will permit said motor vehicle to be stopped before reaching the nearest rail of such crossing and shall not be driven upon or over such crossing until due caution has been taken to ascertain that the course is clear.

Thus it is seen that insofar as protection at grade crossings is concerned the Commission has prescribed regulations for the safe movement of all types of motor vehicles subject to its jurisdiction. Section 192.10 specifically covers vehicles transporting specified dangerous commodities while section 192.11 requires the exercise of care in the movement of other types of motor vehicles.

Under the provisions of the Commission's Motor Carrier Safety Regulations and in order to keep itself posted on the mechanical condition of motor vehicles subject to its jurisdiction, the Commission makes periodic nationwide road checks, the results of which are publicized. These inspections show that many motor carriers do not comply with the Commission's safety regulations. For example, in June 1961, 9,684 units were checked, 1,435 or 14.8 percent were found unserviceable. During that month, 5,788 vehicles were checked, 1,181 or 20.4 percent of which were found unsafe. For purposes of this report, a unit is either a truck operated alone or a tractor, semitrailer, or a trailer of some other description, such as a full trailer; in other words one of the component units that go into a combination of motor vehicles. A vehicle is either a single unit or a combination of units such as a tractor and semitrailer, or a tractor with two trailers, or semitrailer and full trailer operated as a combination.

RECOMMENDATIONS SUGGESTED BY INTERESTED PARTIES

In an endeavor to assist the Commission in reaching some logical and feasible solution to the problem here under consideration, some of the parties of record made certain recommendations as to the action that might be taken in an effort to further reduce the number and severity of rail-highway grade crossings. The first series of such recommendations was submitted by the Chief of the Section of Motor Carrier Safety, Bureau of Motor Carriers, Interstate Commerce Commission, and are as follows:

Recommendation No. 1. The creation of a national committee or group known as the Government Industry Advisory Group, its object being to formulate standards to be referred to appropriate State officials. Such standards would form a basis for evaluation of conditions as to what rail crossings would be considered mandatory for the installation of positive protection, or as an alternative, for their being restricted against the operation of heavily loaded vehicles, particularly those with dangerous cargoes. This group would also have authority to enforce realistic requirements.

Recommendation No. 2. Amendment of the Commission's Motor Carrier Safety Regulations, particularly 49 C.F.R. 192.10 to require the stopping at railroad grade crossings not only of vehicles which are presently required to stop by the regulations, but also vehicles which are used to transport in bulk, whether loaded or empty, commodities which have a particular fire hazard, but which are not classified as flammable under existing regulations of the Commission, i.e., tank vehicles laden with, or used for the transportation,

whether loaded or empty, of liquids having a flash point below 200 degrees Fahrenheit in lieu of the present 80 degree Fahrenheit requirement. Such vehicles should be required to display a sign "This Vehicle Stops at All Railroad Crossings" or equivalent wording of a designated size. It was further recommended that mandatory stops be required for all commercial vehicles with a gross weight of 26,000 pounds or more.

Recommendation No. 3. Amendment of the Uniform Vehicle Code to include a provision requiring all vehicles described in Recommendation No. 2 above to make stops and incorporate such provision in the Code after its adoption by the States.

Recommendation No. 4. That the Government-Industry Advisory Group suggested in Recommendation No. 1 above or some Government-directed comparable group such as the Bureau of Public Roads be charged with the responsiblilites of developing standards for recommendations to State highway departments to determine the category of railroad crossings requiring certain protective treatment. Legislation should be considered to bring about the mandatory application of recommended standards and such legislation should be at the national level to ensure a uniform application throughout the Nation.

Recommendation No. 5. That the suggested Government advisory group adopt standards by which to classify and identify highway-railroad grade crossings as "exempt" crossings and at which motor vehicles would not be required to stop but railroad traffic woudld be required to stop and proceed only when protected by a flagman. This requirement could be patterned after one adopted by the State of California which permits the designation of "exempt" grade crossings with identification by a distinctive sign indicating that no stop need be made.

Recommendation No. 6. That provisions be made wherever possible for a paved or "pull out" lane in advance of every railroad crossing where motor vehicle traffic is heavy, to permit vehicles which are required to stop to do so outside the lane of normal traffic flow.

Recommendation No. 7. That an appropriate Government agency require reflectorized markings on the side of railroad cars.

Certain recommendations were also proposed by railroad respondents which they believe would be helpful in determining what action should be taken to reduce the hazards at grade crossings. These recommendations are set out under appropriate headings and read as follows:

A. *Recommendations with respect to enforcement of existing laws and regulations by the States:*

1. Effective enforcement of existing laws and regulations governing the operation of motor vehicles at highway-railroad grade crossings.

2. That existing enforcement personnel be directed to devote particular attention to the problem of highway-railroad grade-crossing accidents to make periodic enforcement checks at such crossings and to give full publicity to any arrests and convictions resulting from violation of existing laws and regulations governing the operation of motor vehicles at such crossings.

3. That in their enforcement programs, the State and local authorities pay special attention to the operation at highway-railroad grade crossings of motor vehicles transporting dangerous commodities.

4. Enactment of State statutes requiring that motor vehicles using the highways of a State in interstate commerce comply with the rules and regulations of the Interstate Commerce Commission so that a violation of such rules and regulations would constitute violation of State laws and would be enforced by State and local police authorities.

5. That the States and the Federal Government explore the possibility of a matching-fund program so as to provide the States with adequate personnel to enforce highway traffic laws and regulations including those governing the operation of motor vehicles at highway-railroad grade crossings.

B. *Recommendations with respect to the operation of motor vehicles transporting dangerous commodities:*

1. Strict enforcement of State laws and regulations governing the operation at highway-railroad grade crossings of motor vehicles transporting dangerous commodities.

2. Consideration of adopting driver licensing laws and regulations requiring greater competence and responsibility of operators of motor vehicles transporting dangerous commodities.

3. Consideration of adopting laws requiring the use of means by which vehicles transporting dangerous commodities may be readily identified.

C. *Adoption by management operating motor vehicles transporting dangerous commodities of:*

1. Careful routing of vehicles transporting dangerous commodities so as to avoid the use of highway-railroad grade crossings where possible or to confine such use of those crossings where hazards are at a minimum.

2. Careful screening and checking of applicants with respect to their competence, responsibility, and safety records in the employment of personnel to operate motor vehicles transporting dangerous commodities.

3. Effective programs of apprenticeship and driver training.

4. Effective systems of checking upon the conduct of and disciplining of drivers operating motor vehicles transporting dangerous commodities.

D. *Recommendations with respect to operation of schoolbuses:*

1. The careful study of the evidence in this proceeding with respect to the method and manner of operating school buses within the State of New Mexico.

2. The requirement and effective enforcement of more competence and responsibility on the part of the operators and drivers of schoolbuses.

3. Study and consideration of the "monitor system" for the operation of schoolbuses where the driver of the bus is required to stop at all grade crossings and another and more responsible student, properly trained, alights from the bus and flags the schoolbus through the crossing.

4. That those charged with the responsibility for schoolbus operations adopt a practice of careful routing of schoolbuses so as to avoid the use of highway-railroad grade crossings where possible or to confine such use to those crossings where hazards are at a minimum.

5. That State enforcement personnel give particular attention to the operation of schoolbuses at highway-railroad grade grossings so as to obtain strict compliance with existing laws and regulations.

E. *Recommendation to the Commission that it give careful consideration to:*

1. Effective enforcement of its own regulations pertaining to motor vehicle equipment and operation, including those applicable to operation at rail-highway grade crossings and

2. Assignment, on a full-time basis, of adequate Commission personnel to establish and maintain contact with State and local authorities, with safety officers of carriers and industry, and with safety organizations. It should be the duty of persons so assigned to cooperate with and assist police officials, school authorities, carrier and industrial personnel, and the public generally. The objects should include the planning and carrying out of enforcement programs, development and explanation of new methods of control, spot checks at grade crossings, the keeping of proper records, and the making of proper reports, the identification of equipment, the initiation of public education programs, and similar activities to improve safety.

In the presentation of its evidence the National Tank Truck Carriers, Inc., made the following recommendations:

1. *That section 192.10(c) of the Commission's Motor Carrier Safety Regulations be revised to read as follows:*

(c) "Any cargo tank, whether loaded or empty used for the transportation of any dangerous articles as defined in the regulations of the Commission *or any flammable liquid as defined in National Fire Protection Association Pamphlet 385-1962 edition*[1] – shall upon approaching any railroad grade crossing, make a full stop not more than 50 feet nor less than 15 feet from the nearest rail or such railroad grade crossing, and shall not proceed until due caution has been taken to ascertain that the coast is clear; except that a full stop need not be made at:"

2. *That the Commission prescribe regulations supported by legislative authority if found necessary, requiring the following:*

"Every railroad car and locomotive placed in service after _____ and every railroad car and locomotive after _____ shall be equipped on each side with red reflectors as follows: (a) for each car or locomotive less than 30 feet in overall length, one reflector at or near each end; (b) for each car or locomotive 30 feet or more but less than 45 feet in overall length, one reflector at or near each end and one reflector at or near the center; (c) for each car or locomotive 45 feet or more in overall length, one reflector at or near each end and two reflectors spaced approximately equi-distant from each other and the end reflector; (d) reflectors shall meet the requirements for Class A reflectors contained in the 1962 hand book of the Society of Automotive Engineers;; (e) reflectors shall be permanently and securely mounted at a height of not less than 24 inches nor more than 60 inches above the rail level."

3. *That the Commission issue a regulation supported by legislative authority, if necessary, relative to the time and loudness of the sounding of locomotive horns and bells in approaching a highway crossing at grade which would require:*

[1] Italicized portion represents recommended amendments.

(a) Adoption as Commission regulations bulletin No. 5 of the Association of American Railroads;

(b) Locomotive horns, whistles, and bells shall be sounded not less than 20 seconds prior to the arrival of a train at any highway crossing at grade unless the train is stopped prior to the crossing and is flagged across;

(c) The warning signal shall consist of two long sounds, a short sound, followed by a long sound. The warning shall be prolonged or repeated, as may be necessary, from the point where the sound is required to be started until the crossing is occupied by the locomotive or trains.

(d) A marker or markers shall be installed adjacent to the tracks to indicate clearly to the engineer the point at which the warning is required to be started;

(e) The warning sound shall have an intensity of not less than 100 decibels at a distance of 100 feet, (Note: this sound level should be confirmed by Commission tests to determine an adequate sound intensity. Changes should be made as required in order to insure that the sound intensity is sufficient to maintain safety)

4. *That the Commission adopt a regulation relative to the train speeds approaching grade crossings to be as follows:*

The maximum speed of trains in approach to highway crossings at grade shall not exceed the authorized highest legal speed of motor vehicles on the street or highway approaching the same crossing, provided, that this shall not limit trains to the reduced speed required by any motor vehicle law which may require a motor vehicle to be slowed down or stopped in the immediate vicinity of the crossing and furthermore provided, that there shall be a sign located adjacent to the track indicating to the engineer such authorized speed at a sufficient distance to enable him to comply with the above provision.

5. *That the Commission adopt a regulation with legislative authority if necessary, specifying the duties of the railroads with respect to maintenance of grade crossings so as to insure correct visibility at such grade crossings, reading as follows:*

Railroads shall so maintain their right-of-way, including buildings, trees, vegetation, ground level and any other obstructions to vision, and to so position stationary railroad cars and locomotives, as to provide, insofar as their right-of-way is concerned, the following clear sight distances at highway crossings at grade;

From a point located 4 feet above the highway in the center of the highway lane adjacent to the right shoulder of the highway at a point 100 feet from the nearest rail, there shall be no obstruction to clear visibility of any railroad cars or locomotives being operated on such tracks in both directions for a distance of at least 1,000 feet provided, however, that no such clear distance required where crossing is protected at all times by crossing gates, or a watchman, or if the train is stopped before entering the crossing and is flagged over the crossing.

6. *That the Commission adopt with respect to railroads and railroad employees provisions similar to the following Motor Carrier Safety Regulations now applicable to motor carriers and motor carrier employees:*

(a) Section 191.1 – *Compliance required.* Every motor carrier, and his or its officers, agents, representatives, and employees who drive motor vehicles or are responsible for the hiring, supervision, training, assignment, or dispatching of drivers shall comply and be conversant with the requirements of this part.

(b) Section 191.2 – *Minimum requirements.* No person shall drive, nor shall any motor carrier require or permit any person to drive, any motor vehicle unless such person possesses the following minimum qualifications:

(a) *Mental and physical condition.*

(1) No loss of foot, leg, hand or arm.

(2) No mental, nervous, organic, or functional disease, likely to interfere with safe driving.

(3) No loss of fingers, impairment of use of foot, leg, fingers, hand or arm, or other structural defect or limitation, likely to interfere with safe driving.

(b) *Eyesight.* Visual acuity of at least 20/40 (Snellen) in each eye either without glasses or by correction with glasses; form-field of vision in the horizontal meridian shall not be less than a total of 140 degrees; ability to distinguish colors red, green, and yellow; drivers requiring correction by glasses shall wear properly-prescribed glasses at all times when driving, provided however that until January 1, 1954, a visual acuity, either without glasses or by correction with glasses, of at least 20/40 in one eye and 20/100 in the other eye will be acceptable under this section with respect to any person working as a driver on the effective date of this section or who was working as a driver at any time within six months prior to such effective date.

(c) *Hearing.* Hearing shall not be less than 10/20 in the better ear, for conversational tones, without a hearing aid.

(d) *Liquor, narcotics, and drugs.* Shall not be addicted to the use of narcotics or habit-forming drugs, or the excessive use of alcholic beverages or liquors.

(c) Section 192.1 – *Compliance required.* Every motor carrier shall comply with the requirements of this part, shall instruct its officers, agents, representatives, and drivers with respect thereto, and shall take such measures as are necessary to insure compliance therewith by such persons. All officers, agents, representatives, drivers, and employees of motor carriers directly concerned with the management, maintenance, operation, or driving of motor vehicles, shall comply with and be conversant with the requirements of this part.

(d) Section 192.3 – *Driving rules to be obeyed.* Every motor vehicle shall be driven in accordance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated, unless such laws, ordinances, and regulations are at variance with specific regulations of this Commission which impose a greater affirmative obligation or restraint.

(e) Section 193.1 – *Compliance.* Every motor carrier, and its officers, agents, drivers, representatives, and employees directly concerned with the installation and maintenance of equipment and accessories, shall comply and be conversant with the requirements and specification of this part, and no motor carrier shall operate any motor vehicle, or cause or permit it to be operated, unless it is equipped in accordance with said requirements and specifications.

(f) Section 193.48 – *Brakes to be operative.* All brakes with which motor vehicles are equipped shall be operative at all times except as provided in § 193.42 (b) and except brakes on disabled vehicles being towed; but means may be used for reducing the braking effort on the front wheels of any bus, truck, or truck-tractor or of removing the braking effort on the front wheels

of any three axle truck or truck-tractor provided that the means for reducing or removing the braking effort shall be used only when operating under adverse road conditions such as wet, snowy, or icy roads.

(g) Section 193.52 – *Brake performance*. Every motor vehicle or combination of motor vehicles shall, upon application of the service brakes, be capable, at all times and under all conditions of loading, of being brought to a stop within a braking distance of 30 feet from a speed of 20 miles per hour when tested on a dry, smooth, level road free from loose material. The braking distance shall be measured by means of an instrument or machine of the decelerometer type capable of being read in feet to stop from 20 miles per hour.

(h) Section 194.2–*Reportable accidents*. Every motor carrier, except private carriers, shall report to the Commission, in the manner hereinafter prescribed, every accident in which a motor vehicle operated by him or it is involved, and from which there results an injury to or death of any person, or property damage to any and all vehicles, cargo, or other property involved, to an apparent extent of $250.00 or more.

7. *That the Commission institute an investigation into its accident reporting procedure.*

The Central Committee on Highway Transportation of the Division of Transportation of the American Petroleum Institute made the following recommendations:

(a) *Research should be undertaken by government, universities, carriers, and associations in the following areas:*

(1) Whistles and bells.—The effectiveness of locomotive whistles and bells as warning signals should be evaluated. Tests should be made to determine the volumes and tones required to exceed the noise level in vehicles.

(2) Crossing markers. – Research should point the way to the development of markers which are more distinctive.

(3) Crossing protection. – Simpler and less expensive signals are needed.

(4) Driver psychology. – The factors which promote carelessness on the part of vehicle drivers at grade crossings should be studied.

(b) *The Commission should recommend that local officials consider:*

(1) The closing of dangerous crossings. – Where there are unusual hazards and reasonable alternative routes exist, local officials should consider the closing of dangerous crossings to all vehicular traffic.

(2) The development of safe traffic flow patterns.—Traffic controls should be applied so that they will not lead to the diversion of trucks across railroads or the bunching of vehicles with forced stops and delays within hazardous railroad crossing areas.

(3) Appropriate speed restrictions. – Where visibility or other conditions require it, the speed of vehicles should be restricted and wherever imposed, these restrictions should be rigidly enforced.

(c) *The States should be encouraged to:*

(1) Establish exempt crossings.—This will make drivers more attentive at non-exempt crossings.

(2) Accelerate application of crossing protection devices.—Ways and means must be found for increasing the rate of installation of flashing signals and automatic gates.

(d) *By Commission regulation or voluntary action of the railroads, consideration should be given to the following:*

(1) Train speeds. – Realistic speed restrictions should govern the operation of trains in congested areas or over unusually dangerous crossings.

(2) Visibility conditions. – Right-of-way should be kept clear of sight obstructions in the vicinity of grade crossings.

(3) Crossing maintenance. – Poorly maintained crossings can cause vehicles to stall on tracks.

(4) Signaling. – More time warning is necessary for vehicle drivers where they are to bring vehicles to a complete stop, make a decision, and then drive across single or multiple tracks in low gear until their vehicles are completely clear of any approaching train regardless of its rate of speed.

(e) *The Commission should recommend that organizations representative of vehicle drivers intensify their efforts to promote a more widespread understanding of the hazards of railroad-highway grade crossings.*

The recommendations submitted to the Commission for its consideration by the American Trucking Associations, Inc., include the following:

(1) That the Commission institute an investigation into the braking performance of trains looking to the establishment by regulation of reasonable stopping distance criteria for all trains and require all trains to meet those criteria.

(2) That the Commission establish maximum speed limits for all trains which will permit the engineer to have at least enough control that he will be able to stop the train within the distance that he can see ahead, but in no event to exceed the speed permitted on intersecting streets and highways when operating in areas where there are rail-highway crossings at grade.

(3) That in addition to the speed limits proposed in Recommendation No. 2. above, the Commission establish particular reduced speed limits to apply in areas where particular danger of grade-crossing accidents exists, whether because of congestion, traffic density, reduced sight distance for traincrew or motor vehicle operator, or for any other reason, or for any combination of such reasons.

(4) That the Commission establish adequate, uniform warning time to be given to motor vehicle drivers of the approach of trains to grade crossings.

(5) That the Commission establish uniform standards for grade-crossing protective devices and signs similar to those contained in Regulation Bulletin No. 5 of the Association of American Railroads.

(6) That the Commission establish comprehensive requirements governing the physical and mental qualifications of engineers or other railroad employees who operate rail power equipment, comparable to the provisions of Part 191 - Qualifications of Drivers, of the Motor Carrier Safety Regulations (49 C.F.R. 191).

(7) That the Commission require that all railroad equipment should have side reflectors of sufficient size, number, and reflective capacity, and placed in such position that they will furnish adequate warning to drivers of motor vehicles approaching an unlighted grade crossing at night that a train is occupying such crossing.

(8) That the Commission establish regulations for the adequate maintenance of railroad rights-of-way at grade crossings to assure adequate sight distances.

(9) That the Commission review its railroad accident reports now submitted by railroads and the reports of grade-crossing accidents now being prepared by the Commission's staff with a view to correcting deficiencies in information as to causes of accidents and recommendations to be made from grade-crossing accident investigation.

(10) That the Commission review the entire role of the Bureau of Safety and Service in grade-crossing accident investigations and preventions.

(11) That the Commission, in cooperation with the States and other Federal agencies, undertake a census of grade crossings to determine, on the basis of traffic count, terrain, sight distances and other factors, a "priority" system for the institution of, or upgrading of grade-crossing protection.

(12) That the Commission, as a part of the grade-crossing census suggested in Recommendation No. 11 above, and in cooperation with the States and others, designate and mark certain crossings little used by railroads as "exempt" crossings. Motor vehicles should not be required to stop before proceeding over these crossings, but trains should be flagged over such crossings.

(13) In conjunction with the census of crossings recommended above, the States should recognize their role in grade-crossing accident prevention, and should establish speed limits and other specialized regulations for trains using crossings in cities and towns and those which are particularly dangerous, as well as where special local problems call for specifically tailored safety measures.

A summation of the testimony and suggestions of the railroad brotherhoods and witnesses appearing in their behalf, disclose the following recommendations:

(1) A supplementation of present warning devices by installation of advance warning signs at least a quarter of a mile from a grade crossing in the country where drivers are likely to travel at relatively high speeds. The signs could be placed on the highway as a responsibility of the State Highway Department or the county engineer.

(2) That the Commission recommend enforcement campaigns to make drivers realize that they should regard railroad crossing warnings and stop signs as they regard highway "Stop" and "Yield Right-of-Way" signs, at boulevards, thruways, and as they observe the automatic traffic lights which control streams of intersecting traffic on the highways.

(3) That the Commission take action to help formulate public policy about the cost of projects to separate the streams of railway and highway traffic and to provide automatic devices at rail-highway crossings.

(4) That the laws be amended so that the Commission will have jurisdiction over both for-hire and not for-hire trucks engaged in interstate commerce so

that no motor vehicles shall be allowed to transport dangerous commodities in interstate commerce until the Commission finds that the movement is necessary. Similar power should be given to the State authorities as to movements in intrastate commerce.

(5) That the States obtain legislative authority and the Commission, by regulation, require motor vehicles within its jurisdiction, to be placarded with appropriate identification as to the name or trade mark of the business under whose authority the vehicle is being operated.

(6) That studies should be made to determine what rail-highway grade crossings need additional protection and improvement and all such crossings throughout the country should be upgraded.

(7) That practical methods of routing motor vehicles transporting hazardous commodities, be encouraged by management to the end that drivers be directed to use protected crossings.

(8) That a system of improved examination of drivers for motor vehicles be instituted covering not only the drivers employed by large commercial carriers of oil companies which already have extensive training programs, but also the small independent or unregulated carriers.

(9) That the personnel of the State Highway Patrol and the Commission be increased to adequately police compliance with the laws in effect at rail-highway grade crossings within their respective jurisdictions.

(10) That an accelerated program of grade-crossing separation be instituted and the public made to recognize that any practical means of preventing rail-highway grade-crossing accidents is a public obligation, the cost of which should be borne by the public.

(11) That consideration should be given to the use of octagonal highway markings and corrugated road surfacing in approach to rail-highway grade crossings as a means of warning the driver of the motor vehicle, of a crossing ahead.

(12) That consideration should be given to the use of lighting devices or reflectorized material on the sides of locomotives and cars.

By a resolution adopted by the Railway Labor Executives Association, the Commission is urged to recommend the following three-point program to the Congress, the States, cities, and the public:

(1) An expedited program of grade crossing elimination and/or other protection be inaugurated at once.

(2) That the expense incurred by the railroads, over and above the tangible benefits they receive, be borne by the public and that the carriers be appropriately reimbursed for the substantial expenditures necessarily incurred in furthering such program so that the services of the large force of skilled and competent railway employees might be utilized in such programs of protection and installations.

(3) That, in the meantime, and pending completion of the program here urged, the Interstate Commerce Commission immediately inaugurate a campaign of law enforcement by its own officials and staff and urge the states, cities and towns to do likewise all to the end of encouraging and requiring, where necessary, the observance of stop signs as a means of reducing the death toll.

The chief engineer for the Minnesota Railroad and Warehouse Commission recommended, that (1) the authority and jurisdiction over all matters pertaining to highway railroad grade crossings and highway railroad grade separations should remain with the several States and the State agencies designated by the legislatures of these States; (2) that the laws of the several States should be so revised that the State agency vested with this authority could allocate the cost of maintenance as well as the cost of installation of automatic protection and grade separations at each grade crossing coming before it for consideration between the railroad company and the road authority involved. That the genuine, direct benefits to the railroad should be considered as the amount to be assessed against them in making the allocation of such costs of maintenance and installation; (3) there should be set up in each State a fund furnished from highway user tax funds or other public sources to be allocated to help defray that part of the installation and maintenance cost of protective devices and/or grade separations which is allocated to the public; and (4) the duly designated State agency would strongly recommend to the various road authorities that all existing highway-railroad grade crossings that can, be closed without further delay. By this is meant that the State agency, before approving plans for the installation of a grade-crossing protective device or a grade-crossing separation, should investigate the feasibility of closing other crossings in the vicinity of the improvement and channelizing the traffic formerly using such closed crossings over the protected or separated crossing, as the case may be.

A member of the General Assembly of the State of Colorado serving in the House of Representatives was of the opinion that the railroad's problems and responsibilities at grade crossings differ very little from the problems and responsibilities of the counties and cities at road and street intersections. For this reason he recommended that the following suggestions be considered in connection with grade-crossing protection:

1. That the motorist should be made aware of his responsibility and be made conscious of his own safety.

2. That it may be recognized that the responsibility for grade-crossing protection be borne by the public which is actually the beneficiary of grade-crossing protection or elimination.

3. That it should be recognized that a railroad is carrying on a business for the benefit of the public interest.

4. That we commend such laws to the favorable consideration of all who wish to promote public safety and prevent crossing accidents.

The principal transportation engineer for the California Public Utilities Commission was of the opinion that since the constitution of the State of California and the public utilities code gives the California Public Utilities Commission exclusive control over railroad crossings in California, the Federal Government should not take any steps which would have the effect of pre-empting the field of railroad grade-crossing supervision in California. State authorities should not be precluded from modifying any standards prescribed for general application when local conditions require their modification. However, in areas outside the jurisdiction of the California Public Utilities Commission and which are within the jurisdiction of the Interstate Commerce Commission, it was suggested that the latter Commission require (1) the identification of ownership of interstate petroleum tank vehicles by distinct markings or numerals so as to be easily identified on the highways; (2) the installation of reflector buttons or reflectors on all railroad freight cars; and (3) periodic surveys by management of the interstate tank truck operations over the routes followed by the drivers. After such surveys the management of interstate tank truck operations should establish specific routes to avoid hazardous crossings and should call attention of public bodies and/or the railroads of specific crossings in need of signals or other crossing improvements.

The chairman of the Legislative Board of the Brotherhood of Locomotive Engineers for the State of California also made some recommendations for the improvement of grade crossings which included (1) improvement in the enforcement of section 22452 of the California Vehicle Code which requires the stopping of certain designated vehicles at rail-highway grade crossings; (2) upgrading of rail-highway grade crossings throughout the United States; (3) encouragement particularly at the management level of practical methods for the routing of motor vehicles carrying hazardous commodities to the end that dispatchers would direct their drivers to use the protected crossings particularly where such are located in proximity to the unprotected crossings; (4) a system of improved examinations for drivers of motor vehicles should be instituted which would apply not only to the drivers employed by large commercial carriers or oil companies which already have extensive training programs, but also to the small independent or unregulated carriers; (5) the State Highway Patrol and the inspector force of the Interstate Commerce Commission should be increased so that sufficient

personnel will be available to adequately police compliance with the law at the numerous rail-highway grade crossings within their respective jurisdictions; and (6) a program of grade-crossing separation should be accelerated as one sure means of eliminating accidents at grade crossings. It was further recommended that since the grade-crossing problem is a public obligation and not simply a railroad problem, which is inherent in our total transportation system and particularly in the improvement of our highway system, the public should pay for grade-crossing protection without placing the entire burden on the transportation industry.

A senator from the Iowa Legislature admits that rigid enforcement of Iowa's stop and grade crossing laws is desperately needed and recommended the following:

> (1) The continuance of Federal Aid Programs to pay the bulk of the cost of new installations both of grade separation projects and of protective devices in federally aided highways.
>
> (2) That each State be encouraged to adopt a model highway grade-crossing safety fund similar to the Iowa statute which would allocate a portion of highway user taxes to affund for financing the installation of new protective devices at rail-highway grade crossings determined to need protection beyond the normal warning signs.
>
> (3) That each State be encouraged to provide stricter penalties for failure to observe warning signs and devices, to provide an extensive educational campaign to warn the public of the dangers involved, and to institute a regularized systematic campaign of checking and enforcement by the appropriate police and traffic bodies.

In suggesting the above recommendations, this witness contended that since the benefits from crossing protection are almost entirely to the public, the Federal, State, or local governments or a combination of all three should provide for the payment of the major portion of the cost involved. Furthermore, since the responsibility and need is so clearly the result of motor vehicle operation and use that in all probability the public should also assume a substantial part of the responsibility for the maintenance and operation of these devices, if and when, the need and demand for the installation of crossing protection facilities and devices permits the use of available funds for such purpose.

The National Association of Railroad and Utilities Commissioners in September 1961 passed a resolution favoring the review by the appropriate State bodies of the equities of the present cost

allocations of railroad highway separation and grade-crossing protection projects in the light of the change in conditions which today makes such projects of primary benefit to the highway users instead of to the railroads and the need for revision of present cost allocation procedures to reflect such changed conditions. In February 1962, the Railway Labor Executives Association called for "the public to recognize its obligation and to assume the financial burden of grade crossing protection" and urged the Interstate Commerce Commission to recommend to the Congress, the States, cities, towns, and the public that "(1) An expedited program of grade crossing elimination and/or other protection be inaugurated at once, (2) That the expense incurred by the railroads, over and above the tangible benefits they receive, be borne by the public and that the carriers be appropriately reimbursed for the substantial expenditures necessarily incurred in furthering such program so that the services of the large force of skilled and competent railway employees might be utilized in such programs of protection and installations, (3) That, in the meantime, and pending completion of the program here urged, the Interstate Commerce Commerce immediately Inaugurate a campaign of law enforcement by its own officials and staff and urge the states, cities and towns to do likewise all to the end of encouraging, and requiring where necessary, the observance of stop signs as a means of reducing the death toll."

This resolution further provided that "all work required in connection with the implementation of this program will be assigned to and performed by employees represented by organizations affiliated with the Railway Labor Executives' Association." It was explained that this provision of the resolution means that type of work which is customarily performed by railway employees.

DISCUSSION

Summarizing the evidence in this proceeding it is apparent that while mechanical difficulties encountered by the motor vehicle are the causes of some of the grade-crossing accidents, by far the main cause is the failure of the motor vehicle operator to exercise due care and caution or to comply with the existing laws or regulations in the operation of his motor vehicle. In most of these accidents the operator either failed to stop in the face of flashing lights and ringing bells or failed to stop his vehicle as required by State or local law or this Commission's

regulations, or having so stopped his vehicle, the driver proceeded into the crossing directly in front of an approaching train. In some instances the operators of motor vehicles not only did not stop at the crossing but drove their vehicles into the sides of trains. In a number of cases the driver admitted that flashing lights were in operation at the crossing which he saw and also the approaching train, but for some unexplainable reason he nevertheless proceeded into the crossing. These facts conclusively show that the great bulk of crossing accidents is caused by human failure and that there is a definite need for stricter enforcement of all effective safety regulations. It is significant that the speeds of motor vehicles involved in these accidents are generally within a very low range, while the speeds of all types of trains including freight, passenger, and yard (switching) vary from 4 to 90 miles per hour.

Heavy commercial type motor vehicles as a rule are involved in the more serious accidents. The high average number of casualties which resulted from the collision of trains with these types of trucks resulted at least in a large measure because of the weight of the vehicle and in most cases because of the nature of their cargoes coupled with the fact that they were struck in several instances by passenger trains traveling at high speeds. For example, of eight accidents which occurred in 1960, seven involved motor vehicle of the heavy commercial type. Thirty-two persons were killed and 253 injured in these accidents. Twenty-nine of the 32 fatalities resulted from collisions involving such flammable commodities as crude oil, propane, gasoline, and flammable tractor fuel oil. The remaining three persons were killed in a collision between a motor tank vehicle transporting milk, and a train. Fourteen of the 29 persons were killed in a single accident near Bakersfield, Calif., in which a passenger train struck a motor vehicle transporting crude oil having a flashpoint of 106° Fahrenheit as compared with the regulatory criterion for interstate regulations of 80° Fahrenheit. In addition to the 14 fatalities, 106 persons were injured in the same accident. This one accident constituted less than 1/10th of 1 percent of the total vehicle-train accidents in California but accounted for about 20 percent of the casualties in the whole State resulting from motor vehicle-train collisions at public crossings. Notwithstanding the serious accidents in which heavy commercial type motor vehicles are involved and considering the overall operations and not specifically related to

grade-crossing hazard, it has been the experience of the petroleum industry that these types of vehicles operate many times more effectively and safer than the small type vehicles.

In another serious accident involving a collision between a freight train and a tank truck which occurred at Magella, Ala., on August 8, 1960, four persons lost their lives and property damage was extensive. The tank truck was transporting tractor fuel consisting of 90 percent gasoline. A 24-hour traffic survey subsequent to the accident disclosed that out of 177 tank trucks transporting petroleum or petroleum products, 66 or 37 1/4 percent failed to stop at the involved crossing notwithstanding a requirement by State or local law or the Interstate Commerce Commission that such a stop be made. How many of the vehicles failing to stop at this crossing were subject to the regulations of this Commission is not known.

On January 17, 1961, an accident at Magnolia, Miss., resulted in the death of eight and injuries to two persons. This was an accident involving a collision between a passenger train and a motor vehicle transporting gasoline.

Reference to the preceding accidents is not intended to infer that heavy loss of life or high property damage is caused only in accidents where heavy motor vehicles or vehicles hauling flammable commodities are involved. In fact serious consequences have resulted from collisions between trains and motor vehicles transporting other commodities, which include a collision between a passenger train and a motor tank vehicle loaded with fertilizer solution in which 76 persons were injured; a collision between a passenger train and motortruck loaded with eggs resulting in one fatality and injury to 48 persons; a collision between a passenger train and a truck loaded with tomatoes in which the driver of the truck was killed and 46 persons injured; and another collision between a passenger train and a motortruck hauling gravel resulting in injury to the driver of the motortruck, one train-service employee, and 112 passengers. Heavy casualties are also sustained in other types of accidents. For example, 20 school-children were killed and 16 and the driver were injured in a collision between a passenger train and schoolbus near La Salle, Colo., on December 14, 1961. Another example involved a collision on January 31, 1962, at Mendota, Calif., between a freight train and a motortruck transporting 11 farm laborers, all of whom, including the driver of the truck, were killed.

Reference is made to these accidents where a great number of persons were killed and injured with high property damage merely to show that any type vehicle, not necessarily one transporting dangerous commodities, can be involved in a serious accident. In fact, accidents in which vehicles transporting flammable or explosive materials are involved are only a small part of the overall crossing problem. For example, for the 6-year period from 1956 to 1961, inclusive, the average number of accidents, fatalities, and injuries were 3,300, 1,306, and 3,480 respectively, in all grade-crossing accidents reported to this Commission involving for-hire tank motor vehicles. The for-hire tank truck carrier industry was involved in an average of only 22 of these accidents, 2 fatalities, and 10 injuries. On a percentage basis, this industry was responsible for 0.67 percent of these accidents, 0.15 percent of the fatalities, and 0.29 percent of the injuries. Actual statistics of the involvement of unregulated tank motor vehicles in grade-crossing accidents was not available.

However, because of the added danger of fire in instances where a motor vehicle transporting flammable or explosive materials is involved, the severity of the accident is increased. In a considerable number of accidents involving collisions between trains and motor vehicles transporting crude oil, asphalt, fuel oils, and other liquids with a flashpoint above 80° Fahrenheit these materials burned with intensity and contributed to the severe consequences of the accidents. Our regulations define flammable liquids as any liquid which gives off flammable vapors, as determined by open cup tester, at or below a temperature of 80° Fahrenheit (49 C.F.R. 73.115). The National Board of Fire Underwriters in its pamphlet No. 385 defines "Flammable Liquids" as "liquids having a flash point below 200° Fahrenheit and vapor pressure not exceeding 40 psi absolute at 100° Fahrenheit."

Because of the seriousness of the accidents in which flammable liquids with a flashpoint above 80° Fahrenheit are involved, the need for enforcement of all safety regulations is as pronounced for such commodities as it is for explosives and other dangerous commodities. Insofar as flammable liquids are concerned, our regulations require the stopping at grade crossings only those vehicles transporting such commodities having a flashpoint of 80° Fahrenheit or below, while vehicles transporting similar flammable liquids having a flashpoint above 80° Fahrenheit are not required to stop at grade crossings, notwithstanding the fact that flammable liquids having a flashpoint up to 200° Fahrenheit

contribute materially to the severity of accidents. For that reason our Motor Carrier Safety Regulations should be amended to require the stopping at grade crossings of vehicles transporting flammable liquids having a flashpoint below 200° Fahrenheit in lieu of the present flashpoint of 80° Fahrenheit.

Since it is apparent that most grade-crossing accidents are the result of failure to exercise due care or nonobservance of the safety regulations or laws, and its is impracticable to build separations at the more than 200,000 crossings in the United States, interested parties in this proceeding submitted numerous other suggestions. The record is replete with many recommendations made by the interested parties for the elimination of crossing hazards each of which has been given due consideration. However, only those recommendations will be discussed herein which in our opinion are pertinent to the issues under consideration.

Included in these suggested recommendations is the creation of an organization either by resolution of Congress or by an Executive order of the President, composed of a high ranking Government official and representatives of industry, labor, State officials, and others with a direct interest. This organization should have the power to formulate uniform standards to be referred to the appropriate State officials which would form the basis for evaluation of conditions as to what rail crossings would be considered mandatory for the installation of positive protection, or, as an alternative, for their being restricted against the operation of heavily loaded vehicles, particularly those with dangerous cargoes. A similar concerted effort should be undertaken, cooperatively, to obtain broad acceptance of realistic requirements and the enforcement thereof. It should also have authority to make recommendations to legislative bodies such as State legislatures and it should also have responsibility and authority to consult with experts, to make or arrange for the making of studies and to make recommendations with respect to standards which would lead to elimination of grade crossings in particular cases, to the installation of specific types of grade-crossing protection devices, such as flashing lights or positive restraining devices, and with respect to closing of particular crossings to heavily loaded commercial vehicles by reason of difficulty in negotiating grades, extremely restricted slight distances, and other complicated elements in relation to the nature and density of railroad and highway traffic.

Uniformity of traffic laws among the States would be of material help to operators of motor vehicles particularly those operating in in more than one State. With the aid of the Uniform Vehicle Code, gradual progress is being made in bringing these laws into conformity with accepted uniform practice. The type of organization referred to in the preceding paragraph could add stimulus along this line. As a further recommendation it should have authority to classify and identify rail-highway grade crossings as exempt crossings where rail traffic is so infrequent that the stopping of a motor vehicle would be required only when protected by a flagman.

In our opinion the creation of such an organization vested with the described authority would materially help in solving the grade-crossing problem. The unified efforts of such an organization particularly with respect to the Federal and State agencies would conform to the pronouncement of the Commission contained in its 69th annual report (page 50) wherein we stated that—

> Our function in the prevention of commercial vehicle accidents is of vital importance. It is unique, and it complements but does not duplicate the activities of the States in the attainment of the objective of safety on the highways. We deal with basic accident cause factors peculiar to highway transportation, which only a Federal Government agency can effectively control through examination of records and properties of carriers at places located outside the jurisdiction of the States through which they operate. By investigation we determine the causes of accidents occurring throughout the Nation, and through such investigations and knowledge gained thereby develop and improve equipment and driver standards. Every State agency is limited by its own State borders whereas we are concerned with highway transportation crossing the lines of all the States. Our function has to do, for example, with maximum hours of service, driver qualifications, and uniform vehicle design elements, as contrasted with enforcement of traffic regulations by State and local police. We need the cooperation of State agencies, but it is our obligation to exert leadership and to establish standards in the interstate field. The State agencies look to us for this leadership.

We are not convinced that the suggested recommendation to provide pullout lanes where motor vehicles may stop outside the lane of normal traffic flow would materially aid in reducing the number of accidents at rail-highway grade crossings. It is true that some States are using these deceleration lanes but this record leaves some doubt as to their value because of the increased danger created when the vehicle endeavors to return to the normal traffic flow from the deceleration lane.

Considerable evidence was introduced regarding a consideration to require reflectors or reflectorized markings on the sides of

railroad cars. Congress was interested in this matter and a bill (H.R. 1821) was introduced in the 83d Congress that would have directed this Commission to require the placing of reflecting or luminous material on railroad cars. This Commission, on February 4, 1953, advised Congress that it did not recommend approval of this bill. The Secretary of Commerce also informed Congress on July 14, 1953, that the Department of Commerce recommended against the enactment of this bill. No action was taken on the bill. Bills HR 2399 and HR 182 were introducted by the 84th and 85th Congress respectively which had provisions similar to these in HR 1321. When bill HR 182 was being considered, we recommended its enactment subject to certain amendments but called attention to the limitations on the measure of protection which would be afforded by these reflectorized markings. We pointed out the doubtful value of these markings as a safety measure unless they were kept free and clean of dust, dirt, and grime. We took a similar position regarding the enactment of bills HR 1005, HR 340, and HR 1008 which were introduced in the 86th Congress and contained provisions similar to those in the prior bills. No action was taken on any of these bills.

The value and effectiveness of reflectorized material on railroad cars was discussed at length by several witnesses in this proceeding. Counsel for the New York Central Railroad, who made a study of the causes of accidents, was of the opinion that reflectorized material on cars would prevent few, if any, grade-crossing accidents. In support of this claim, reference was made to the fact that for the period from 1957 through 1960 approximately 35 percent of the crossing accidents involved motor vehicles striking the side of a train or about 1,000 per year. Almost 40 percent of this total occurred during daylight hours when reflectorized material would serve no useful purpose. Three hundred and nineteen of the 665 nighttime side-of-train accidents that occurred in 1960 involved a motor vehicle striking the locomotive, and 41 of the remaining accidents involved the head end of the train leaving 305 accidents or 46 percent in which the motorist might possibly have benefited from reflectorized markings. Of these side-of-train accidents, 258 or 39 percent occurred at crossings protected by gates, flashers, or flagmen, and 253 or 38 percent occuring at lighted crossing. It is contended that the number of accidents that might be prevented by reflectorizing the sides of freight cars should be further reduced

to allow for the 39 percent that ignore gates, flashers, or flagmen and the 38 percent that collided with trains at lighted crossings. In the 665 cases in which the motorist struck the train in the nighttime, 54 percent involved the head end and 46 percent that portion of the tain back of the head end. Substracting 54 percent of the 258 accidents which occurred at the specifically protected crossings from the 305 in which the motorist struck the train back of the head end, reduces the possible preventables to 165. Another indeterminable number must be deducted from the 253 accidents which occurred at illuminated crossings thereby further reducing the number of possible preventables. In addition, consideration should be given to such factors as mechanical failure to motor vehicle, fatigue, drunkeness, inattentiveness, speeding, and weather conditions that might defeat the purpose of reflectors.

The cost of installing reflectorized material on the 2 million freight cars presently in service was estimated to cost as low as $30 million and as high as $200 million. No reliable estimate was made of the cost of maintaining this material on the sides of the cars but because freight cars move through dust, rain, sleet, and snow receiving hard usage and are subjected to the overflow of chemicals, acids, oils, and other substances and to direct application of heat and open flame in thawing out frozen lading, they would need constant cleaning, care, and replacement. From the foregoing it is doubtful whether the placing of reflectorized material on the sides of cars would serve any useful purpose or justify the expense of installing such material. Therefore, we are disinclined to recommend its installation.

On exceptions it is contended that the examiner erred in finding that since motor vehicles operated in interstate or foreign commerce by private carriers are involved in many of the rail-highway grade-crossing accidents, and it is difficult to locate or identify them, it is essential in the public interest that they be required to register with us and to placard their vehicles with their names or trade name. Exception is also taken to the examiner's related recommendation that we proceed to a conclusion with our rulemaking proceeding instituted by Notice of Proposed Rule Making dated May 4, 1961, in docket No. 3666, notice No. 50, providing for the placarding, reporting, and registration of motor vehicles operated by private carriers engaged in the transportation of explosives and other dangerous commodities in interstate or foreign commerce.

Notwithstanding the severance of the rulemaking procedding in docket No. 3666, notice No. 50, from the instant proceeding, the evidence presented in the instant proceeding deals in considerable detail with the experiences of numerous witnesses regarding unregulated carriers and these witnesses recommend that the vehicles of such carriers be placarded for easier identification. This evidence convincingly shows that the regulated carrier generally presents no problem and that the principal offender insofar as safety on the highway and the grade crossings is concerned, is the exempt, unregulated, or irresponsible carrier. We are convinced on this record that the findings of the examiner in this respect are adequate and are supported by substantial evidence. In further support of this conclusion, reference is made to the following testimony relative to the cross-examination by counsel for the Association of American Railroads of the director of the American Trucking Associations:

Q. I gather you take a little dim view of these government trucks that run around Washington with the sign on the back of them "frequent stops," then? I know I personnally do. I just wondered whether you did or not. In the course of this proceeding there have been, or there has been, testimony introduced by, I believe, a witness for the Interstate Commerce Commission, one or more witnesses called by the railroads and who were State officials, and possibly otherwise, that I cannot presently recall. I believe those witnesses have stated that the principal problem with respect to highway safety and highway grade-crossing safety rests not with the so-called regulated motor carriers, and I term it the larger, more responsible substantial certificated regulated carriers, but rests more with the exempt, unregulated, irresponsible type of operator. Do you have any views in that respect: In other words, do you, based upon your experience in this area and your knowledge of the safety problems and your work in connection with highway traffic, do you agree with what those witnesses said, if I have described their testimony accurately?

A. Yes, Mr. Moloney, I believe the great problem lies with that portion of what might be loosely termed the trucking industry which we cannot reach through organizations or do not reach through enforcement. Yes, sir.

Q. In other words, it is your view that the principal trouble rests not with the regulated, so-called regulated carrier but in this other area that is difficult to police.

A. Yes, and I think the 48 reports that are called to our attention here indicated that.

Since the unregulated carriers are independently operated they are difficult to identify because of lack of markings on their vehicles. In order that a fruitful approach can be made toward a realistic curbing or elimination of hazards at rail-highway grade crossings, special attention must be given to these carriers

that are mostly responsible for accidents at these crossings. Closer surveillance is needed for these carriers by some agency or organization capable of strictly enforcing the requirements of effective safety regulations, particularly those requiring the stopping of motor vehicles at rail-highway grade crossings. The prescription of rules requiring such carriers to placard their vehicles so that they could be more readily identified, particularly in instances where any of the safety regulations are violated, would materially aid in reducing the hazards at grade crossings. The need for such placarding finds support in a colloquy between one of the counsel for respondents and the chairman of the Legislative Board of the Brotherhood of Locomotive Engineers for the State of California regarding the California law which requires for-hire vehicles to be presently identified:

Q. The marking law was the one then that applies only to vehicles for-hire, that requires vehicles be clearly marked. Do you think it would be a good thing if the law were so changed as to require vehicles, particularly those handling dangerous commodities even though operating not for-hire, carry some plain identification mark?

A. Well, if we are going to reduce accidents and try to help the drivers of these various commodities to traverse the railroad tracks more safely, I would say "yes."

Q. In other words, a vehicle with a dangerous commodity is just as dangerous whether it is operated for-hire or not for hire?

A. That is right.

Q. And you said that the responsible companies that you named pretty generally had their rigs clearly marked and were operated quite safely as a rule, but if that same law were applied to these other so-called independent or fly-by-nights, do you think it might help if those vehicles could be identified even though they didn't operate for-hire?

A. I know it would help, and that's the thing I would like to have brought to the attention -- it is the small, what we call, commonly call, the small independent or the unregulated carrier. That is the one that we would like to have marked, to obey this law.

Q. On that matter of marking or placarding or whatever you might call it, you heard some testimony here yesterday, I believe, Mr. Mitchell, about motivation in safe driving. I believe it was by the gentlemen from the National Safety Council. Is it your opinion that if a vehicle was plainly marked so that not only a train crew, but other motorists, could identify the vehicle, that that might have some bearing on the attitude of the driver of the motor vehicle if he knew that everybody could identify him.?

A. There is no doubt about it.

In view thereof, the proceeding instituted by Notice of Proposed Rule Making dated May 4, 1961, in docket No. 3666, notice No. 50, providing for the placarding, reporting, and registration of motor

vehicles operated by private carriers engaged in the transportation of explosives and other dangerous commodities in interstate or foreign commerce, shall proceed to a conclusion. We do not propose here to prejudge that proceeding since the findings and conclusions in that proceeding must, of course, be based on and supported by the evidence to be presented therein and not on the facts submitted in the instant proceeding. However, since the evidence presented in the instant proceeding is relevant to the issues in docket No. 3666, a recommendation herein that definite and conclusive action be taken in docket No. 3666, is amply supported.

It is inescapable from a review of the facts developed in this proceeding that the only realistic conclusion that can be reached is that most of the rail-crossing accidents are caused by human failure arising from noncompliance by the drivers with the applicable Commission regulations or the State laws and regulations. The only hope to lessen the number of accidents is a systematic enforcement of existing safety laws and regulations. To be successful there must be cooperation between the Federal and the local governments. The statistics submitted show that by far the greatest number of accidents involve automobiles. For example, of the 2,931 accidents in 1961, 2,271 involved passenger automobiles while 633 involved trucks. But authority to promugate or enforce safety regulations does not extend to passenger automobiles or trucks or buses operating solely in intrastate commerce. Thus the important area of regulation is left to the States. In this respect section 192.3 of our Motor Carrier Safety Regulations (49 C.F.R. Sec. 192.3) provides that—

> **Every motor vehicle shall be driven in accordance with the laws, ordinances, and regulations of the jurisdiction in which it is being operated, unless such laws, ordinances, and regulations, are at variance with specific regulations of this Commission which impose a greater affirmative obligation or restraint.**

This means that if a State law requires a particular vehicle to stop (and the vehicle is subject to the Commission's jurisdiction), the failure to stop constitutes a violation of section 192.3. However, since we lack the personnel to police this regulation and lack the power to arrest, there is no actual enforcement. On the other hand, if the reverse of this situation were to come about, namely, the adoption of State laws providing that the State highways could not be used in interstate commerce except in compliance with our regulations, so that a violation of the latter would also be a vio-

lation of State law, this uniformity could be very helpful in both enforcement and acceptance of the regulations particularly if this were accompanied by a State-Federal matching fund by which funds for enforcement would be made available to the State. With the exception of Arkansas, few, if any, of the States have prosecuted violators of State laws requring stopping at rail-highway grade crossings. As a practical matter the responsibility for enforcement of safety regulations for motor vehicles such as stopping or proceeding over crossings at prescribed speeds, has been commited to the States.

Strict enforcement of existing safety regulations whether by Federal or local authorities or jointly by both is the most essential element in a reduction of crossing accidents and would undoubtedly be of material aid in solving the crossing problem. The Federal Bureau of Investigation also feels the need for enforcement of safety regulations, as evidenced by its law enforcement bulletin issued in February, 1962, wherein it stated on page 20 of volume 31, No. 2 that—

One of the most disastrous types of highway accidents is the collision of railroad trains with loaded gasoline and oil trucks at railroad-highway grade crossings. In a period of 15 months, from March 1, 1960, to June 21, 1961, three such accidents occurred in the areas of Bakersfield, Calif., Magnolia, Miss., and Bettendorf, Iowa, bringing fiery death to 26 people and injury to 106 others. Property valued in the millions of dollars was lost in the burning gasoline and oil.

Such catastrophes tax to the utmost the manpower and facilities of local fire and police departments and hospitals.

* * * * * * *

Interstate Commerce Commission and state regulations require that trucks loaded with flammmable liquids be brought to a stop before moving over railroad grade crossings and that the driver shall look in both directions for approaching trains and shall not proceed until he can do so safely. However, many violations of these regulations have occurred in the past, and when collisions occur, the usual victims are train engine crews and truck drivers.

The seriousness of the type of accident, which destroys life and property, and the growing number of trucks transporting gasoline and oil longer distances over city streets and highways, point up a definite need for law enforcement officers to give increased policing to gasoline trucks using rail-highway grade crossings. Enforcement of forcement of existing regulations will alert drivers to stop, look, and listen before moving over these crossings.

It is argued by some of the respondents that there is a need for this Commission to look into its regulation of railroads in seeking a solution to the grade-crossing problem. In this connection it is suggested that maximum speed for trains be established and that an investigation be instituted by us into the braking

performance of trains, looking to the establishment by regulation of reasonable stopping distance criteria for all trains, and requiring all trains to meet those criteria.

From the outset it should be pointed out that while ordinances issued by local and municipal authorities restrict the speed of trains in many localities particularly in congested areas, we have no authority to regulate speeds as such except in an indirect manner. For example, under the authority provided in section 25 of the Interstate Commerce Act, we instituted an investigation in *Appliances and Systems to Promote Safety of Operation*, 268 I.C.C. 547, whereby trains are required to be equipped with certain signal systems or train-control devices if they exceed certain speeds. In that proceeding it was found that in order to promote safety of railroad operation it is necessary in the public interest to require the railroads to—

> 1. Install on that part or parts of its lines over which any passenger train is operated at a speed of 60 or more miles per hour, or any freight train is operated at a speed of 50 or more miles per hour, an automatic block-signal system which shall conform to the rules, standards, and instructions prescribed by the order of the Commission of April 13, 1939, as herein amended, or a manual block-system which shall conform to the following conditions:
>
> A passenger train will not be permitted to the block when occupied by another train, except under flag protection; no train will be admitted to the block when occupied by an opposing train or by a passenger train, except under flag protection; and a train other than a passenger train will not be permitted to follow a train other than a passenger train into the block except when authorized by a train order, permissive signal, or prescribed form, and when such movement is so authorized, the following train must proceed prepared to stop short of a train or obstruction, but not to exceed 15 miles per hour.
>
> 2. Install on that part or parts of its line over which any passenger or freight train is operated at a speed of 80 or more miles per hour an automatic train-stop or train-control system or automatic continuously controlled cab-signal system which shall conform to the rules, standards, and instructions prescribed by the order of the Commission of April 13, 1939, as herein amended.

Thus the railroads have an alternative of operating their trains either at speeds lower than those referred to above without installing the prescribed signal installations or at the higher speeds, provided the prescribed signal systems are installed. These signal installation do not relate to any intersecting highway traffic but are only for the protection and operation of rail traffic.

On this record we are not convinced that the prescription of maximum speeds for trains or the imposition of any restrictions in train speeds would materially aid in reducing the number of

rail-highway grade-crossing accidents. The prescription by us of maximum speeds for trains would interfere with the rail carriers' operating rules over which we have no jurisdiction, would impede the flow of interstate commerce, and would in effect place the railroads at a disadvantage competitively with other modes of transportation particularly motor carriers. It has been suggested that train speeds should not exceed the speed permitted on intersecting streets and highways when operating in areas where there are rail-highway crossings at grade. Such a restriction would prevent the trains from operating economically. For example, the Chesapeake and Ohio Railway in its run from Chicago, Ill., to Grand Rapids, Mich., a distance of 173 miles, crosses a total of 337 rail-highway grade crossings, 136 of which are protected with flashers, 89 are without flashers, and 112 are private crossings and are protected only by crossbuck signs. If the trains operating over this segment of track are required to reduce their speed to correspond to the speed of motor vehicles operating over these various crossings it is evident that the trains would be greatly delayed because the acceleration and deceleration of motor vehicles is far superior to that of trains. This disadvantage to the railroads would not be in harmony with, nor conform to, the declaration of the national transportation policy which reads:

> It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this Act, so administered as to recognize and preserve the inherent advantages of each; to promote safe, adequate, economical, and efficient service and foster sound economic conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; to cooperate with the several States and the duly authorized officials thereof; and to encourage fair wages and equitable working conditions; — all to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the Postal Service, and of the national defense. All of the provisions of this Act shall be administered and enforced with a view to carrying out the above declaration of policy.

Regarding the issue of train brake performance it has been suggested that this Commission consider the establishment by regulation of reasonable stopping distance for all trains and authorize its field staff to make necessary inspections and tests

and place out of service such railroad equipment which fails to or causes or contributes to failures, to meet the established stopping distance criteria.

This record is devoid of any evidence to the effect that defective railroad equipment caused or contributed to the cause of any grade-crossing accident. In this respect the evidence shows that there is no uniformity in stopping distances for trains and that there is considerable variance in such distances, but there is no basis to conclude that because of this variance, the train brakes were defective or inefficient or were the cause of any of these accidents. The distances within which trains can be stopped depend on a number of factors including train length, tonnage, speed, grade, type of locomotive, condition of rails, and whether the train brake application is in service or emergency. It would be difficult, if not impossible, to prescribe any accurate or definite stopping distance for trains under all conditions since the braking distances for all trains are not the same. Tests shows that the same type of trains operated at the same speeds do not stop within the same stopping distance. It was estimated by one of the witnesses that under normal conditions a passenger train consisting of eight cars and three diesel units traveling between 45 and 50 miles per hour would require approximately 2,000 feet within which to stop under emergency application of the train brakes. Another witness, with many years' experience as a locomotive engineer expressed an opinion that for a heavy tonnage train it would require as much as 2 miles within which a normal stop could be made. This witness called attention to the hazards created to the men in the caboose and the possible damage to lading and to the engine and cars when an emergency application of the brakes is made on a long train. These hazards are due to the slack action between each car which may vary from 3 to 5 inches. On a freight train of from 120 to 140 cars there would be approximately 1 1/2 to 2 car lengths of slack and when it runs in after an emergency application of the train brakes, this tremendous slack action can cause the lading to shift with possible damage or may injure the trainmen in the caboose. Similar hazards are created when brakes are applied in emergency on a passenger train.

Stopping distances for motor vehicles can be more readily ascertained and established but the engineer of a train does not have the same degree of control over his train that a driver has over his car or truck. As between the engineer and the driver of

a motor vehicle, the latter is in a far better position to control the movement of his vehicle than is the engineer of a train because of the difference between the adhesion of the train wheels to the rails and the contact between the motor vehicle wheels and the roadway.

Under the provisions of the Power Brake Law of 1958, supra, we prescribed rules, standards, and instructions for the installation, inspection, maintenance, and repair of all power or train brakes (49 C.F.R., part 132). Failure to comply with any rule, regulation, or requirement promulgated thereunder by this Commission subjects the violator to a penalty. Not only are initial tests of the brakes required to be made at the beginning of train movements but running tests are also required to be made in transit to determine whether they are functioning properly. Furthermore, should any equipment on a locomotive be found to be defective or unsafe, it may be taken out of service by us under authority prescribed by the Locomotive Inspection Act (49 USC 22-34).

In view of the existing power brake regulations we are not convinced that additional regulations in this respect are needed. Furthermore, it is doubtful whether the prescription of stopping distances for trains, as suggested, would materially aid in preventing accidents at grade crossings, because of the impracticability of compliance with any prescribed stopping distances.

This record raises an issue regarding the adequacy of time warning for vehicle drivers, of trains approaching a crossing. This is a matter over which this Commission has no jurisdiction and is one entirely within the province of the railroad. Normally the rail carrier installs a whistle signal board or post in approach to grade crossings as to signal to the enginemen that the train is approaching a grade crossing and that the train whistle should be sounded as a warning to motor vehicles also approaching the same crossing. There is no uniform distance at which the whistle post is located from the crossing. Reference made to eight accident reports issued by this Commission show that these whistle posts in seven instances were located at distances varying from 947 feet to 1,683 feet of the crossing. In the remaining report (Railroad Accident Report No. 3828) it is shown that the Illinois Commerce Commission by order No. 176 exempts all railroads from sounding train whistle at crossings which are protected with automatic flashing lights. Because of the location of these whistle posts, some doubt is raised concerning the sufficiency

of warning time afforded the driver of a motor vehicle approaching a crossing. For instance, allowing sufficient time for the sound of the whistle to reach the crossing, it is noticed in the eight referred to accident reports that the actual warning time received by the motor vehicle operator varied from 9.6 to 24 seconds. Reference to other accident reports discloses no uniformity in warning time which varies from a low of 8.2 seconds to a high of 101.4 seconds. The whistle post distances vary from 780 feet from the crossing to 4,542 feet. Considering the time that it takes for a truck to negotiate a crossing, it appears that a minimum warning time of at least 20 seconds is essential for safety. This would conform to a requirement in Bulletin No. 5 of the Association of American Railroads recommending standards and practices for railroad-highway grade-crossing protection, wherein it is recommended that where the speed of a train is 30 miles per hour the warning signal for a highway clearance shall operate for not less than 20 seconds before arrival of any train.

A review of a number of accident reports issued by us and referred to at the hearing, discloses that had 2 or 3 seconds more been allowed for the motor vehicle to negotiate the crossing there would not have been a collision between the train and the motor vehicle. It is argued therefore that the speeds of trains should be restricted. By the same token, had the motor vehicle waited 2 or 3 seconds longer or the speed of the train been a little slower, it is probable that an accident would not have occurred. Notwithstanding these possibilities it is believed that a warning time of at least 20 seconds would aid materially in preventing many grade-crossing accidents but this is a matter over which we have no jurisdiction. Since the local authorities and the railroads are in a position to require the prescription of a requirement that sufficient warning time be afforded at rail-highway grade crossings, it is suggested that they give this matter serious consideration, rather than have us seek legislative authority in this respect.

Consideration will be given next to the recommendation that we adopt, with respect to railroads and railroad employees, provisions similar to certain provisions of the Motor Carrier Safety Regulations now applicable to motor carriers and motor carrier employees. Particular reference is made to section 191.2 of such regulations. Based on this record we are not impressed with the effectiveness of such recommendation for the prevention of grade-crossing accidents. For example, it does not appear that the establishment of minimum physical and mental requirements by

this Commission for engineers and other railroad employees, comparable to those now in effect for motor vehicle drivers, would be of any material value because of the various differences in the two modes of transportation. Furthermore, the comprehensive record made here gives no evidence indicating that the physical or mental qualifications of railroad employees contributed in any way to rail-highway grade-crossing accidents. Each individual railroad presently has in effect and enforces rigid physical requirements of engineers and other railroad employees. It should also be pointed out that after the railroad employees are accepted for employment they are subjected to periodic physical examinations. The frequency of such examinations is increased as the employees grow older. In addition they are required to participate in a continuing educational program respecting their duties and responsibilities.

Included in the recommendation proposing the applicability of certain motor carrier regulations to railroads and railroad employees are requirements (sections 193.48 and 193.52 of the Motor Carrier Safety Regulations) that all brakes be operative and that motor vehicles be able to stop, upon application of the service brakes within a specified braking distance. In this respect the Power Brake Law of 1958, supra, among other things, requires that airbrakes on all trains must be tested and inspected not only at initial terminal, but, in addition, running tests are required to be made and if the brakes are found not operating properly the train must be stopped, cause of failure ascertained, and corrected and running tests repeated. These regulations which are enforced by us, adequately meet the requirement contained in the recommendation that all brakes be operative at all times.

Section 193.52 of the Motor Carrier Safety Regulations also deals with brake performance since it prescribes the stopping distance for all motor vehicles after application of the service brakes. The prescription of a comparable rule for trains while desirable would be impracticable, if not impossible, because of the various factors that affect the distances within which trains can be stopped. Stopping distances for trains, as heretofore discussed, cannot be as easily computed as those for motor vehicles because the same factors do not affect both forms of transportation and some of the factors applicable to trains are not applicable to motor vehicles.

Another proposed recommendation warranting some discussion is a recommendation that this Commission institute an investiga-

tion into its railroad accident report procedures particularly respecting the conclusions stated in its accident reports as to the "cause" of the accident. In this respect some criticism has been directed at these statements, most of which conclude that the accident was caused by a motortruck occupying a rail-highway grade crossing immediately in front of an approaching train, or that a motortruck failed to stop short of a train moving over a rail-highway grade crossing, or that a motortruck was driven onto a rail-highway grade crossing immediately in front of an approaching train. It is contended that while these statements are true, a more detailed analysis of the causes of accidents would be more enlightening.

The procedure in reporting accidents by our Bureau of Safety and Service is an issue that does not have a direct bearing on the prevention of grade-crossing accidents, but its significance is appreciated in formulating recommendations for grade-crossing accident prevention. Statistical studies made from these accident reports are indispensable to a sound legislative policy and in the formulation of adequate safety regulations. The statement of the cause of the accident contained in most of these reports would be more meaningful if it gave more complete and detailed information regarding the cause or causes of the accident. It must be conceded, however, that in many instances because of the death of members of the traincrew and the driver of the truck involved in the accident, the best evidence is not always available and the Commission must rely on secondary evidence in determining the cause of the accident.

We concur in the views of the examiner that this Commission should give consideration to a revision of its accident reporting procedure and include in its accident reports a more detailed analysis of the causes of accidents.

One of the basic elements to be considered in this proceeding is the cost of upgrading crossings and the installation of additional grade-crossing protection, and upon whom the cost burden should fall. For practical reasons this cost should be borne by public funds as users of the crossing plus the fact that it is the increasing highway traffic that is the controlling element in accident exposure at these crossings. There is ample precedent for such a conclusion. Already the Federal Government, with State matching funds, is paying a good share of crossing elimination on Federal-aid highways. This appears to be a satisfactory solution as well as the only solution to offer any practicality for meeting the in-

creasing problem on all crossings. Many of the States share in the costs of improvements at grade crossings under a pro rata arrangement between the railroads and the public, dependent upon the benefits received by each. This arrangement has been successful where used. Insofar as this record is concerned, the consensus supports a conclusion that the major costs of grade separation and protection at rail highway grade crossings should be borne by the public since the public is the principal recipient of the benefits derived from grade-crossing protection.

These contentions deserve serious consideration particularly in view of the changes that have taken place since the early days of railroading. In the past it was the railroad's responsibility for protection of the public at grade crossings. This responsibility has now shifted. Now it is the highway, not the railroad; and the motor vehicle, not the train which creates the hazard and must be primarily responsible for its removal. Railroads were in operation before the problem presented itself and if the increasing seriousness is a result of the increasing development of highways for public use, why should not the cost of grade-crossing protection be assessed to the public. This is the contention of many of the witnesses testifying at the hearing in this proceeding.

As early as 1935, the United States Supreme Court, in *Nashville, C. & St. L. Ry. v. Walters*, 294 U.S. 405, 422-423, had this to say regarding the change in the responsibility for grade-crossing protection:

> The railroad has ceased to be the prime instrument of danger and the main cause of accidents. It is the railroad which now requires protection from dangers incident to motor transportation. Prior to the establishment of the Federal-aid system, Tennessee highways were built under the direction of the county courts, and paid for out of funds raised locally by taxation or otherwise. They served in the main, local traffic. The long distance traffic was served almost wholly by the railroads and the water lines. Under those conditions the occasion for separation of grades was mainly the danger incident to rail operations and the promotion of safety was then the main purpose of grade separation. Then, it was reasonable to impose upon the railroad a large part of the cost of eliminating grade crossings; and the imposition was rarely a hardship. For the need for eliminating existing crossings, and the need of new highways free from grade-crossings, arose usually from the growth of the community in which the grade separation was made; this growth was mainly the result of the transportation facilities offered through the railroads. the separation of grade crossings was a normal incident of the growth of rail operations, and as the highways were then feeders of rail traffic the community's growth and every improvement of highway facilities benefited the railroad. The effect upon the railroad of constructing Federal aid highways, like that here in question,

is entirely different. They are not feeders of rail traffic. They deplete the existing rail traffic and the revenues of the railroads. Separation of grades serves to intensify the motor competition and to further deplete rail traffic. The avoidance thereby made possible of traffic interruptions incident to crossing at grade is now of far greater importance to the highway users than it is to the railroad crossed. For the rail operations are few; those of the motor vehicles very numerous.

Because of the sharp acceleration of highway improvement, decrease in the number of trains operated, and the tremendous increase in vehicular traffic in the past few years, together with further increases that may be expected in the future, there is a real problem as to how grade crossing improvements are to be financed. It is quite evident that most of the benefits to be derived from any stepped-up improvement program of highway safety, especially at rail-highway grade crossings will be to the drivers of motor vehicles. For this reason it would be unfair to expect the railroads to assume this heavy financial burden. When considering this problem in 1944, the president of the American Association of State Highway Officials said:

If all installations and separations which might be justified by the explosive growth of motor vehicle traffic were actually carried out, the railroads would be bankrupt if they were required to pay all or even a very substantial part of the cost. The only way to get the speed in grade crossing elimination and automatic protection, which may be demanded, is for the public to assume the cost.

Based on the above facts there is ample support for concluding that there is a significant relationship between the costs of improving grade crossings and the benefits which can be derived from the investment. This relationship is a meaningful element of fiscal planning for future grade crossing improvements. In such planning it is essential that some decision be made as to how the financial responsibility for these improvements can be shared equitably by the direct users of the crossing and other beneficiaries, particularly the commercial users of our highways. This however, is a matter beyond the control of this Commission. It is one that requires legislative action if its conditions are to be fulfilled. Since the Congress has the authority to promulgate any necessary legislation along this line it is recommended that it give serious study and consideration to enactment of legislation with a view to having the public including the principal users, assume the entire cost of rail highway grade crossing improvements or allocating the costs equitably between those benefited by the improvements.

This recommendation to the Congress is in keeping with U.S. Senator Hubert H. Humphrey's suggestion that—

> In this connection may I suggest that the Interstate Commerce Commission is best able to determine what, if anything, it needs in the way of amendments to the law and additional funds with which to do a job in this field that would bring results. I believe that Congress would appreciate the Commission's views on the subject and I suggest that the report in this proceeding might be an appropriate place to spell them out.

Some discussion is warranted regarding the suggested recommendation that certain rail-highway grade crossings, such as those infrequently used by railroads, be properly identified as exempt crossings at which motor vehicles would not be required to stop but railroad traffic would be required to do so and proceed only when protected by a flagman. Section 192.10 of the Commission's Motor Carrier Safety Regulations (49 CFR 192.10), does not require stopping by motor vehicles at "an abandoned or exempt grade crossing which is clearly marked as such by or with the consent of the proper State authority, when such marking can be read from the driver's position."

It may be argued that the little used railroad spur which crosses a heavily traveled highway is a deterrent to enforcement because the habit of not stopping may spread from spur track or infrequently used crossing to more dangerous types thereby resulting in serious accidents. We are not convinced that this argument has any merit.

The purpose of designating certain crossings as exempt crossings is to avoid rear end collisions on the highway when unexpected, sudden stops at little used crossings are made by motor vehicles, particularly buses, trucks laden with flammables and explosives, and certain other classes of highway vehicles that are required to stop at all crossings. The speeds of motor vehicles are so great on the highways as to endanger such a vehicle when it does stop. Local motor vehicle operators, who are familiar with the crossing, have a tendency to negotiate the crossing without stopping, knowing that it is seldom used by the railroad. On the other hand drivers of motor vehicles unfamiliar with the crossing would stop in compliance with the regulations. Accidents have occurred where a following local driver, not expecting such a stop, collides with the stopped vehicle. The dangers of such rear end collisions would be removed if the

recommendation were adopted exempting motor vehicle operators from stopping at properly identified exempt crossings unless the crossing is protected by a flagman. Vehicular traffic would be expedited and potential accidents eliminated in instances where heavy commercial vehicles stop and attempt to cross the crossing in front of an approaching train. Because of their weight and slow acceleration, it is difficult at times for these types of vehicles to complete a crossing, after stopping, in time to avoid a collision with an approaching train. This situation is aggravated if the approach to the crossing is an ascending grade. Crossing time for these vehicles would be shortened considerably and the danger of a collision lessened if they are permitted to pass over the crossing at such exempted crossings.

We agree with the examiner that the designation of exempt crossings in instances where railroad traffic is extremely limited is a step in the right direction, but such crossings should be properly identified and clearly marked. The Vehicle Code of California provides that the driver of a motor vehicle need not stop at any branch line which crosses a road or street to or from a public ferry and on which there is less than daily train service and with characteristics and freight service similar to industrial track operations where, with the approval of the Public Utilities Commission, distinctive signs are displayed indicating that no stop need be made unless a train or locomotive is approaching upon such branch line. California's safety record has not been impaired because of these exempt crossings. In fact, its overall safety record has improved. Those responsible for the protection of such exempt crossings might, in lieu of flagmen protecting a grade crossing, consider the installation at the considered crossing of a three-light traffic-control system similar to those used at highway intersections which would remain green for highway traffic except when activated manually by a member of the train crew or other railroad employee to protect the crossing for an occasional rail movement at which time the lights could be changed to amber and then to red. Such a signal, if showing green, would eliminate unnecessary stops by vehicles otherwise required to do so, and if showing amber or red, it would be a positive warning to all highway traffic thereby reducing the possibility of rear end collisions with vehicles stopping at the crossing. Observance of the signal by vehicular traffic would also eliminate collisions at such crossings between the railroad and the vehicles at the crossing.

FINDINGS

We adopt the examiner's findings as revised herein:

(1) That the principal cause of grade crossing accidents is failure of motor carrier operators to stop or exercise due care and caution or to observe and comply with existing safety laws and regulations.

(2) That drivers of trucks and operators of motor vehicles engaged in intrastate operations not subject to the regulations of this Commission are responsible for the major part of the accidents occurring at rail-highway grade crossings.

(3) That the passenger automobiles account for most of the accidents at rail-highway grade crossings or nearly four times the number of accidents in which motortrucks are involved while motorbuses account for an insignificant number of crossing accidents each year.

(4) That Federal, State, and local enforcement of laws and regulations governing operation of motor vehicles at rail-highway grade crossings, particularly of laws requiring stopping at such crossings, is woefully weak.

(5) That there is a definite need for prompt action to enforce safety laws and regulations.

(6) That while collisions between trains and trucks hauling flammable liquids and other dangerous commodities have created much publicity and activity among certain groups, nevertheless these types of accidents are actually a small part of the train-truck accidents, and the grade-crossing accidents including all types of vehicles, are a small part of the overall highway safety problem. However, because of the severity of these types of accidents, the frightening fatalities and injuries, and heavy loss of property, special efforts should be made by Federal, State, and local authorities with the cooperation of those responsible for the movement of motor vehicles transporting dangerous commodities to strictly enforce all safety laws and regulations, divert such vehicles where possible away from rail-highway grade crossings, and accelerate the installation of crossing protection devices.

(7) That the creation either by resolution of the Congress or Executive order of the President of a Government-Industry Advisory Group or similar organization would materially aid in furthering the cause of crossing accident prevention because it would provide a sound means for organizations presently engaged in an effort to reduce the number and severity of grade-crossing accidents, to be brought together for conferences, discussions, and guidance with respect to standards, uniform rules, and other matters of material interest looking toward accident preventive measures.

(8) That there is a need for uniform warning time of not less than 20 seconds to be given to motor vehicle drivers of the approach of trains to grade crossings.

(9) That this record shows a need only for such additional legislation as may be helpful in the effectuation of a program to bring about better enforcement of existing safety regulations and of educating the public to their responsibilities regarding the prevention of accidents at rail-highway grade crossings. No extensive legislation is needed. The solution to this problem can be greatly advanced through more effective enforcement of existing

Federal, State, and local safety regulations by the respective authorities; by an exerted and cooperative effort on the part of the railroads in improvement of grade-crossing maintenance, providing adequate warning time, and better visibility to drivers of motor vehicles approaching crossings; by the universal application of latest standards for uniform traffic control and warning signs by responsible highway and traffic authorities; and by motor carrier management particularly where dangerous commodities are involved making intensified efforts to select capable drivers, enforce compliance by their drivers with safety laws and regulations, and otherwise adopt measures lessening the hazards at grade crossings.

(10) That there is a lack of adequate supervision and selection of competent personnel and drivers of schoolbuses. However, the responsibility for the safe transportation of schoolchildren rests with the State and local authorities since schoolbuses normally do not operate across State lines.

(11) That a revision of our rail-highway grade-crossing accident reports, particularly the statements contained therein as to the causes of accidents, is warranted. A more detailed and informative statement in this respect would be valuable in the preparation of more meaningful statistics and evidence upon which future action can be predicated in the solution of the grade-crossing problem.

(12) That present safety regulations have not been shown to be deficient and the facts of record amply support a conclusion that such regulations are reasonably adequate for the promotion of safe operations at grade crossings provided they are effectively enforced.

(13) That highway users are the principal recipients of the benefits flowing from rail-highway grade separations and from special protection at rail-highway grade crossings. For this reason the cost of installing and maintaining such separations and protective devices is a public responsibility and should be financed with public funds the same as highway traffic devices.

(14) That the proceeding should be discontinued.

RECOMMENDATIONS

We are convinced, as a result of this investigation, that in order to achieve a substantial reduction in the human and economic waste attributed to grade-crossing accidents there must be an intensification and coordination by Federal, State, local, private, and other groups and organizations responsible for traffic safety programs and enforcement of safety regulations, of all of their efforts to improve the safety program, and to produce a substantially improved safety record at grade crossings as soon as practicable. This action is necessary in view of the inadequacy of enforcement of present regulations by the authorities responsible for such enforcement. No doubt, adoption of some of the recommendations submitted by the parties to this proceeding would materially aid in removing some of the hazards associated with

rail-highway grade crossings. We are apprehensive, however, as to the adoption of some of the other recommendations because we are not convinced that the facts and evidence submitted justify their adoption or that they would be of any material benefit in minimizing the grade-crossing hazards or materially aid in the solution of the grade-crossing problem. We realize and appreciate that not one of the proposed recommendations is sufficient in itself to provide the answers to this problem, but it is also apparent that the adoption of too many recommendations might becloud the real issue and lessen the effectiveness of any remedies that this investigation is intended to provide. Legislation alone is no panacea in this instance.

Upon consideration of the evidence presented herein and looking toward the objectives to be achieved by this investigation we conclude that the examiner's recommendations are proper and correct in all material respects and are hereby adopted as our own with the addition of the following: (1) that a national standard be established to classify and to identify crossings as "exempt" crossings for the purpose of having them marked clearly as crossings at which vehicular traffic is not required to stop before proceeding over the crossing and (2) that our motor carrier safety regulations, particularly section 192.10, be amended to require the stopping at rail-highway grade crossings not only of vehicles which are presently required to stop by the regulation, but also vehicles which are used to transport in bulk, whether loaded or empty, commodities which have a particular fire hazard, but which are not classified as flammable commodities under our existing regulations, for example, tank vehicles laden with, or used for the transportation, whether loaded or empty, of liquids having a flashpoint below 200° Fahrenheit.

We recommend that:

1. An organization be created either by resolution of Congress or by an Executive order of the President, composed of a high ranking Government official and representatives of industry, labor, State officials and others with a direct interest in improved protection at rail-highway grade crossings, its object to formulate uniform standards to be referred to appropriate State officials. Such standards would form a basis for evaluation of conditions as to what rail crossings would be considered mandatory for the installation of positive protection, or, as an alternative, for their being restricted against the operation of heavily loaded vehicles, particularly those with dangerous cargoes. A concerted effort also be undertaken, cooperatively, to obtain broad acceptance of realistic requirements, and the enforcement thereof.

This organization should be thoroughly representative in its composition. It should be charged with the responsibility of making direct recommendations to affected Federal, State, and local highway authorities, enforcement officials, and the appropriate organizations representing railroads, motor carriers, and carriers of hazardous materials. It should have authority to make or arrange for the making of studies to evaluate the causes of grade-crossing accidents as a basis for preventive measures, to make recommendations to legislative bodies such as State legislatures, to consult experts, to make recommendations with respect to standards which would lead to elimination of grade crossings in particular cases, to the installation of specific types of grade-crossing protection devices, to the designation and proper identification of infrequently used grade crossings where vehicular traffic will be exempted from the requirement to stop before proceeding over the crossing and with respect to closing of particular crossings to heavily loaded commercial vehicles by reason of difficulty in negotiating grades, extremely restricted sight distances, and other complicating elements in relation to the nature and density of railroad and highway traffic.

2. The Congress give serious consideration to the enactment of legislation to provide public funds for the installation and maintenance of signals, lights, gates, or other protective devices intended to prevent accidents at rail-highway grade crossings. Such funds be used to defray the costs of such installations and maintenance under some equitable arrangement between the users of the crossing.

3. In order for more effective enforcement of existing safety regulations at grade crossings, the State legislatures give consideration to enactment of or amendment of existing laws or regulations to provide that highways cannot be used in interstate commerce except in compliance with this Commission's regulations so that a violation of the latter would also be a violation of the State laws or regulations and enforceable by the State authorities, as well as by this Commission.

4. State legislatures in addition to the inauguration of an intensified program to enforce all of its grade-crossing regulations, consider the adoption of rigid driver licensing laws and regulations for operators of motor vehicles transporting dangerous commodities and whenever possible, require such vehicles to be rerouted over grade crossings located outside of congested areas where hazards are at a minimum.

5. State and local authorities responsible for the selection of schoolbus drivers and the operation of schoolbuses, carefully investigate and screen all applicants respecting their character, competence and responsibility.

6. The railroads take prompt action to improve maintenance of railroad rights-of-way at grade crossings to provide safer passage for motor vehicles and remove all sight obstructions so as to provide adequate sight distances for motor vehicle operators and traincrews.

7. The railroads establish adequate, uniform warning time of not less than 20 seconds to operators of motor vehicles of the approach of trains to grade crossings.

8. The organization referred to in Recommendation No. 1 above adopt standards by which to classify and identify rail-highway grade crossings as "exempt" crossings and at which motor vehicles would not be required to stop but railroad traffic would be required to stop and proceed only when protected

by a flagman. This requirement could be patterned after one adopted by the State of California which permits the designation of "exempt" grade crossings with identification by a distinctive sign indicating that no stop need be made.

Upon consideration of the record herein, we find that the following action is warranted in the public interest:

a. This Commission in cooperation with State and local authorities will make an intensified and cooperative effort immediately to enforce all laws and regulations in effect at rail-highway grade crossings paying particular attention to those applicable to motor vehicles transporting flammable and other dangerous commodities.

b. This Commission will proceed to a conclusion with its rulemaking proceeding instituted by Notice of Proposed Rule Making dated May 4, 1961, in docket No. 3666, notice No. 50 providing for the placarding, reporting, and registration of motor vehicles operated by private carriers engaged in the transportation of explosives and other dangerous commodities in interstate or foreign commerce.

c. This Commission will commence a prompt revision of its rail-highway grade-crossing accident reports so as to provide a more detailed and informative description of the cause of each accident.

d. This Commission will promptly institute a rulemaking proceeding looking to the amendment of its Motor Carrier Safety Regulations (49 C.F.R. 190-197), particularly section 192.10, to require the stopping at rail-highway grade crossings not only of motor vehicles which are presently required to stop by the regulation, but also motor vehicles which are used to transport in bulk, whether loaded or empty, commodities which have a particular fire hazard, but which are not classified as flammable liquids under existing regulations of the Commission, i.e. tank vehicles laden with or used for the transportation, whether loaded or empty, of liquids having a flashpoint below 200° Fahrenheit in lieu of the present 80° Fahrenheit requirement. Such vehicles should be required to display a sign "This Vehicle Stops at All Railroad Crossings," or equivalent wording of a designated size.

VICE CHAIRMAN WEBB, dissenting in part:

Except as otherwise indicated in this expression, I agree with the observations, findings, conclusions, and recommendations set forth in the Commission's report.

It is important that the highway-rail grade-crossing accident problem be viewed in proper perspective. Notwithstanding the tremendous increase in accident exposure over the past 15 years, the number of deaths at grade crossings has been reduced by 23 percent. This accomplishment merits a "well done" for State regulatory and safety officials, rail and motor carriers, carrier employees, the motoring public, the National Safety Council, and for many other safety-conscious individuals and groups.

I do not agree with the Commission's narrow interpretation of section 25 of the Interstate Commerce Act. On the other hand, I do not agree that the Commission's authority under that section should be exercised to the extent urged by the motor carrier interests in the proceeding. It does seem to me, however, that the establishment of a uniform warning time is desirable and that the Commission could establish such time by regulation in the unlikely event that the railroads and the Commission were unable to resolve the matter by less formal means.

Although the Commission states that it does not intend to prejudge the proceeding in docket No. 3666, notice No. 50, I believe that the Commission has done so, improperly and unnecessarily. I desire to reserve judgment on the matter requiring the placarding of the vehicles of private carriers.

COMMISSIONER FREAS, dissenting in part:

My objections to the report are twofold. Initially, I do not subscribe to the prejudgment implicit in the discussion of docket No. 3666, notice No. 50. While I believe that proceeding should go forward, I reserve decision as to the issues therein.

Secondly, at this time, I would effectuate by order the finding respecting amendment of the Safety Regulations by requiring the stopping at grade crossings of tank vehicles used in the transportation of flammable liquids having a flashpoint below 200° F. The order instituting this proceeding is broad enough to cover such action, no opposition has been registered thereto, and the time and expense of another proceeding can be avoided.

COMMISSIONER HUTCHINSON, whom COMMISSIONERS MURPHY and BUSH join, dissenting in part:

I disagree with the majority report to the extent that it fails to implement and effectuate the findings in the report respecting amendment of the Motor Carrier Safety Regulations (49 C.F.R. 190-197, particularly section 192.10).

The order of February 6, 1961, instituting this rulemaking proceeding, clearly provides that one of the objectives of the investigation is the possible amendment of the Motor Carrier Safety Regulations. As indicated in the majority report, the evidence clearly demonstrates the need for amendment of the regulations. In the circumstances, institution of a new rulemaking proceeding looking toward such amendment is a waste of time since it seeks to redetermine what has already been established.

I would enter an appropriate order amending the Motor Carrier Safety Regulations without further delay.

By the Commission.

(SEAL)

HAROLD D. McCOY,
Secretary.

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No. 662

Supreme Court of the United States

OCTOBER TERM, 1965

AMERICAN TRUCKING ASSOCIATIONS, INC., and NATIONAL TANK TRUCK CARRIERS, INC., *Appellants*,

v.

UNITED STATES OF AMERICA, INTERSTATE COMMERCE COMMISSION, THE ATCHISON, TOPEKA and SANTA FE RAILWAY COMPANY, ET AL., and SOUTHERN RAILWAY COMPANY, ET AL., *Appellees*.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

MOTION TO AFFIRM

WILLIAM M. MOLONEY
929 Transportation Building
Washington, D. C. 20006

HUGH B. COX
WILLIAM H. ALLEN
701 Union Trust Building
Washington, D. C. 20005

JAMES A. BISTLINE
P. O. Box 1808
Washington, D. C. 20013

Attorneys for Railroad Appellees

December 1965

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ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

MOTION TO AFFIRM

Appellees, the Atchison, Topeka and Santa Fe Railway Company et al. and Southern Railway Company et al. (hereinafter sometimes referred to as "railroad appellees"), pursuant to Rule 16(1)(c) of the Rules of this Court, move that the final judgment of the District Court be affirmed on the ground that the questions presented are so unsubstantial as not to need